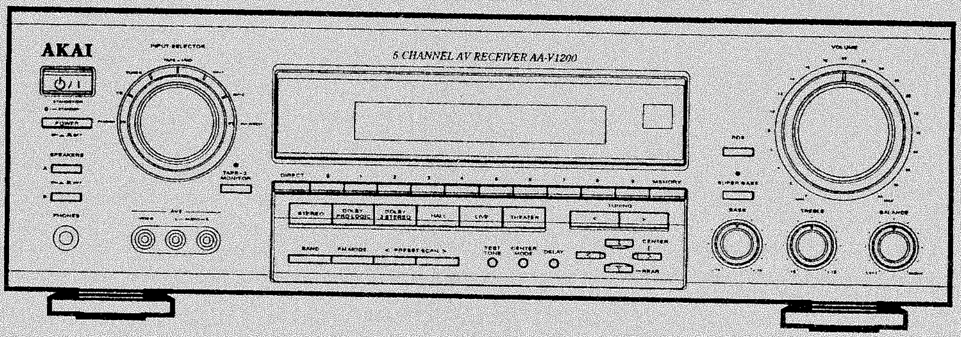
AKAI SERVICE MANUAL



5 CHANNEL AV RECEIVER

SPECIFICATIONS

MODEL AA-V1200

AMPLIFIER

1 When SURROUND is "OFF"

Sensitivity and impedance
PHONO : 2.8mV/47kΩ
CD, TAPE, AV 1/2 : 200mV/47kΩ
Frequency Response
PHONO(RIAA STANDARD CURVE)
: 50Hz~15kHz(±1dB)
CD, TAPE, AV 1/2 : 10Hz~60kHz
S/N Ratio
PHONO(IHF-A) : 65dB
CD, TAPE, AV 1/2(IHF-A) : 90dB
Power Output
130W+130W
(at 1kHz, 8ohm, THD 0.05%)
Tone control
Treble : ±10dB (10kHz)
Bass : ±10dB (100Hz)

2 When SURROUND is "ON"

(4 ch surround mode)
Power Output (at 1ch Drived)
Front : 100W+100W (1kHz, 0.1% THD, 8ohm)
Rear : 100W+100W (1kHz, 0.5% THD, 8ohm)

3 When Dolby Pro Logic is "ON"/ DVD IN

Power Output (at 1ch Drived)
Front : 100W+100W (1kHz, 0.1% THD, 8ohm)
Center : 100W (1kHz, 0.1% THD, 8ohm)
Rear : 100W+100W (1kHz, 0.5% THD, 8ohm)

TUNER

1 FM SECTION

Frequency Range : 87.50MHz to 108.00MHz
(50kHz step)
Sensitivity (S/N 30dB) : 3.0µV
Total Harmonic Distortion
MONO : 0.3%
STEREO : 0.5%
Signal to Noise Ratio
MONO : 70dB
STEREO : 65dB
Frequency Response : 20Hz~15kHz
Image Rejection : 60dB
Stereo Separation (1kHz) : 30dB

2 MW SECTION

Frequency Range : 522kHz to 1620kHz
(9kHz step)
Sensitivity (S/N 20dB) : 55dB
Total Harmonic Distortion : 1.5%
Signal to Noise Ratio : 40dB
Image Rejection : 35dB

3 LW SECTION

Frequency Range : 146kHz ~ 290kHz
(1kHz step)
Sensitivity (S/N 20dB) : 60dB

GENERAL

Power consumption : 400W
(At 1/8 POWER 6% OVER VOLTAGE)
Power supply : AC 230V, 50Hz
Dimension (W× H× D) : 430× 142×355mm
Weight : 10.1kg (net)

Standard accessories

Remote control uint..............................	1
Operator's manual	1

* For improvement purposes, specifications and design are subject to change without notice.

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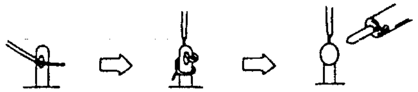
SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identifide by the △ (*)symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specifide replacements.
   Examples :RF converters, tuner units, antenna selectswitches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially :
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers(insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Make sure that wires to do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.

Please leave them at an appropriate depot. All other household batteries can be thrown out with the household waste.

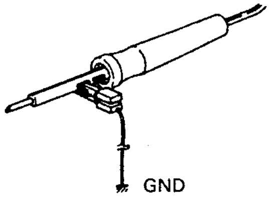
SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions.
The leakage-current should be less than 0.5mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2M Ohms.

PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair adjustment, make sure that there are no metal obiects in the narrow gap between the P. C. board or the mecha parts and the base
3. The Micro-Computer and the CD signal processing ICs can be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.



4. Do not loosen any screws in the pick-up block.
   When handing the pick-up block, please refer to the points to NOTE when replacing the pick-up block.
5. Keep safety for hazardous invisible Laser Radiation, DO NOT watch the Laser Beam (Objective lens) directly.
6. Models for some countries, laser warning labels are affixed on the unit and inside of the unit, as shown below. Read it carefully for your safety, when repairing or adjusting the unit.

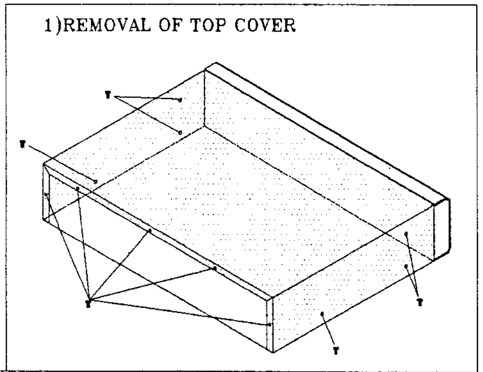
INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

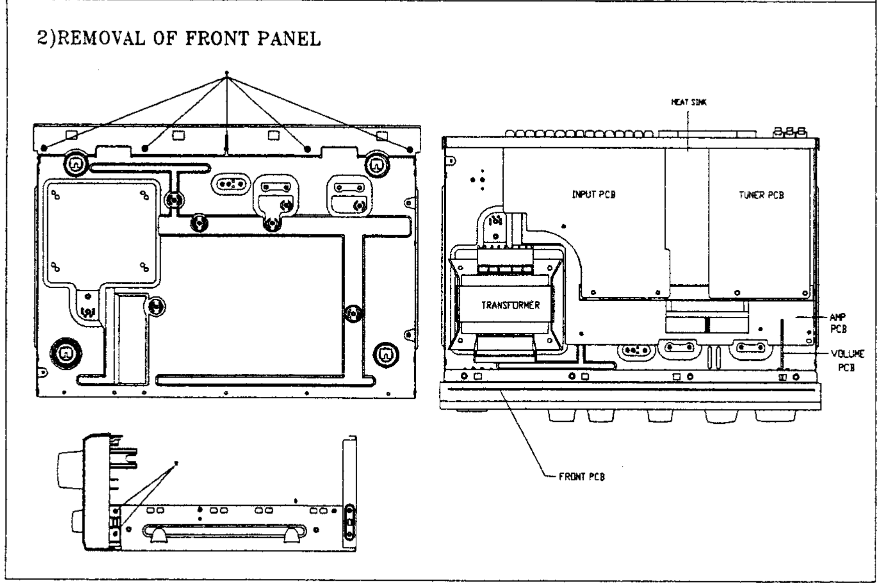
Primary destination of units are indicated with the following alphabet.

Symbols	Principal Destinations
B	UK
E	Europe (except UK)
S	Australia
U	Universal Area
Y*	Custom version

DISASSEMBLY



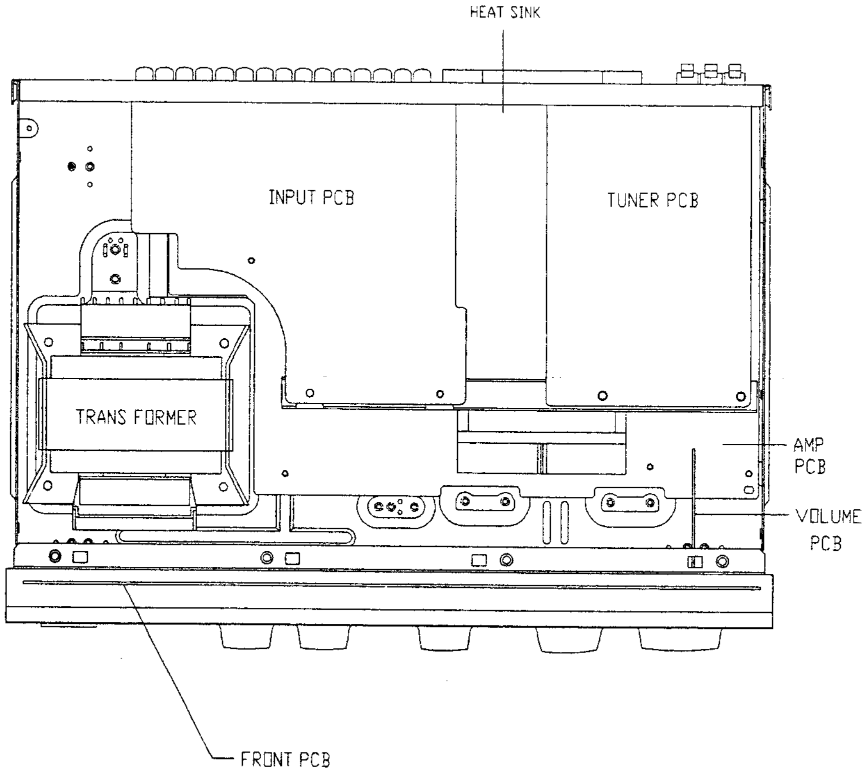
1)REMOVAL OF TOP COVER



2)REMOVAL OF FRONT PANEL

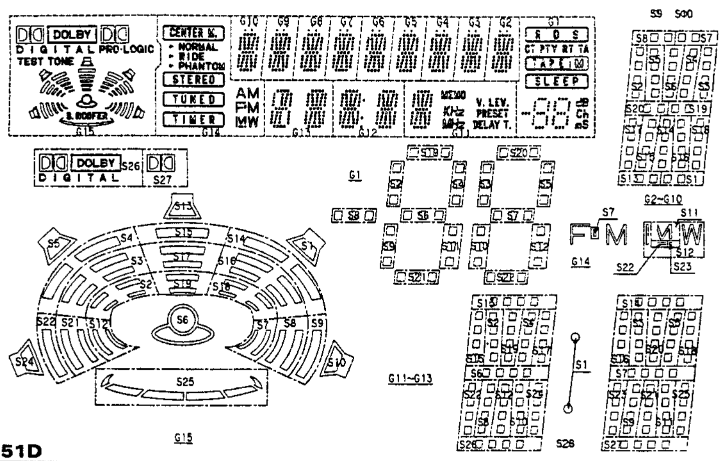
HEAT SINK
INPUT PCB
TUNER PCB
TRANSFORMER
AMP PCB
VOLUME PCB
FRONT PCB

PRINCIPAL PARTS LOCATION



HEAT SINK
INPUT PCB
TUNER PCB
TRANS FORMER
AMP PCB
VOLUME PCB
FRONT PCB

FIP DISPLAY



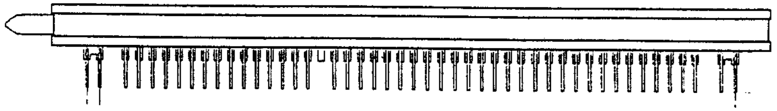
S01 S02
S9 S00
DOLBY
DIGITAL PRO·LOGIC
TEST TONE
S.WOOFER
CENTER M.
NORMAL
WIDE
PHANTOM
STEREO
TUNED
TIMER
G10 G9 G8 G7 G6 G5 G4 G3 G2 G1
R D S
CT PTY RT TA
TAPE M
SLEEP
AM
FM
MW
MEMO
KHz
MHz
V. LEV.
PRESET
DELAY T.
dB
Ch
mS
G15
G14
G13
G12
G11
S26
S27
G1
G2~G10
S7
S11
S12
S22
S23
G14
S1
G11~G13
S25
S28
G15

TYPE :CM1551D

ANODE & GRUD ASSIGNMENT

	G1	G2~G10	G11	G12	G13	G14	G15
S1	RDS	S1		S1		STEREO	S1
S2	S2	S2	S2	S2		NORMAL	S2
S3	S3	S3		S3	S3		S3
S4	S4	S4	S4	S4	S4	▷(NORMAL)	S4
S5	S5	S5	KHz	S5	S5		S5
S6	S6	S6	S6	S6	S6	FM	S6
S7	S7	S7	DELAY T	S7	S7	S7	S7
S8	S8	S8	S8	S8	S8		S8
S9	S9	S9	MHZ	S9	S9	CENTER M.	S9
S10	S10	S10	S10	S10		TIMER	S10
S11	S11	S11		S11	S11	S11	TEST TONE
S12	S12	S12	S12	S12	S12	S12	S12
S13	CT	S13	S13	S13	S13	PHANTOM	S13
S14	PTY	S14	MEMO	S14	S14		S14
S15	RT	S15	S15	S15	S15	▷(PHANTOM)	S15
S16	TA	S16	V. (LEV.)	S16	S16	AM	S16
S17	TAPE M	S17	S17	S17	S17	WIDE	S17
S18	SLEEP	S18	(V.) LEV.	S18	S18		S18
S19	S19	S19	S19	S19	S19	▷ (WIDE)	S19
S20	S20	S20	PRESET	S20	S20	TUNED	PRO. LOGIC
S21	S21			S21	S21		S21
S22	S22		S22	S22	S22	S22	S22
S23	ms			S23	S23	S23	S. WOOFER
S24	ch		S24	S24	S24		S24
[illegible]	[illegible]			S25	S25		S25
S26			S26	S26	S26		S26
S27				S27	S27		S27
S28				S28			

PIN CONNECTION



PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Assignment	F1	F1	NP	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4

Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Assignment	G3	G2	G1	NL	S28	S27	S26	S25	S24	S23	S22	S21	S20	S19	S18

Pin No.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Assignment	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3

Pin No.	46	47	48	49	50
Assignment	S2	S1	NP	F2	F2

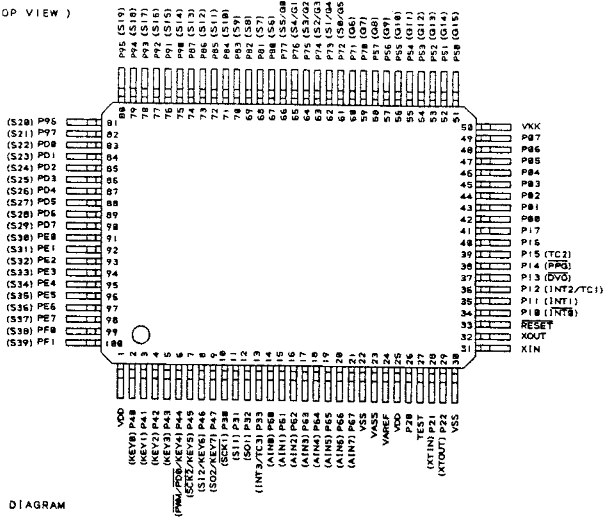
IC PIN FUNCTION (IC :ANAM 1228AT)

NO.	NAME	I/O	DESCRIPTION
1, 25	VDD	-	POWER SUPPLY (+5V)
2	CLOCK	O	NJU 7313 AND NJW1103 CONTROL PORT
3	DATA	O	NJU 7313 AND NJW1103 CONTROL PORT
4	REQUST	O	NJW1103 CONTROL PORT
5	STROBE1	O	NJU7313 CONTROL PORT
6	POWER ON/OFF	O	POWER ON/OFF CONTROL OUTPUT
7	CE	O	PLL IC (LM 7001) CONTROL OUTPUT
8	CLOCK	O	
9	DATA	O	
10	FM(L)		WHEN "FM" IS "L"
11	MONO		MONO CONTROL OUTPUT
12	DATA	O	RDS IC (TDA 7330B) CONTROL PORT
13	CLOCK	O	
14	STEREO IN	I	STEREO IN CONTROL INPUT
15	TUNED	I	TUNED CONTROL INPUT
16	HEADPHONE IN	I	
17~21	KEY MATRIX	I	KEY MATRIX PORTS
22,23,27,30	VSS	-	GND
24	VAREF	-	A/D CONVERTOR REFERENCE VOLTAGE
26	BACK UP	I	BACK-UP MODE CONTROL INPUT
28,29	FUNCTION SELECTOR	I	ENCODER DATA INPUT
31	X IN	I	8MHz CRYSTAL CONNECTING TERMINAL
32	X OUT	O	
33	RESET	I	SYSTEM RESET PULSE INPUT
34	REMOTE IN	I	REMOTE CONTROL SIGNAL INPUT
35	BUS IN	I	SYSTEM CONTROL SIGNAL INPUT
36	BUS OUT	O	SYSTEM CONTROL SIGNAL OUTPUT
38	TUNER MUTE	O	TUNER MUTE ON/OFF CONTROL OUTPUT
39	SURROUND ON/OFF	O	SURROUND ON/OFF CONTROL OUTPUT
40	VOLUME DN	O	MASTER VOLUME UP/DOWN CONTROL OUTPUT
41	VOLUME UP	O	
42	AV1 MUTE	O	AV1 REC MUTE ON/OFF CONTROL OUTPUT
43	TAPE MUTE	O	TAPE REC MUTE ON/OFF CONTROL OUTPUT
44	FUNCTION MUTE	O	FUNTION MUTE ON/OFF CONTROL OUTPUT
45	VIDEO	O	VIDEO CONTROL (NJM 2279D) CONTROL OUTPUT
46	VIDEO	O	
47	STROBE 3	O	FUNCTION LED IC (NJU 3713D) CONTROL OUTPUT
48	DATA3	O	
49	CLOCK	O	
50	VFLP		(-33V) NEGATIVE POWER SUPPLY FOR FIP BLINKING
51~65	GRID	O	FIP GRID CONTROL OUTPUTS
66~94	SEGMENT	O	FIP SEGMENT CONTROL OUTPUTS
95	OPTION A	I	AREA OPTION PORT
96	OPTION B	I	
97	OPTION C	I	
98	OPTION D	I	
99	PROTECT IN	I	INPUT FROM PROTECTION CIRCULT
100	POWER MUTE	O	POWER MUTE CONTROL OUTPUT

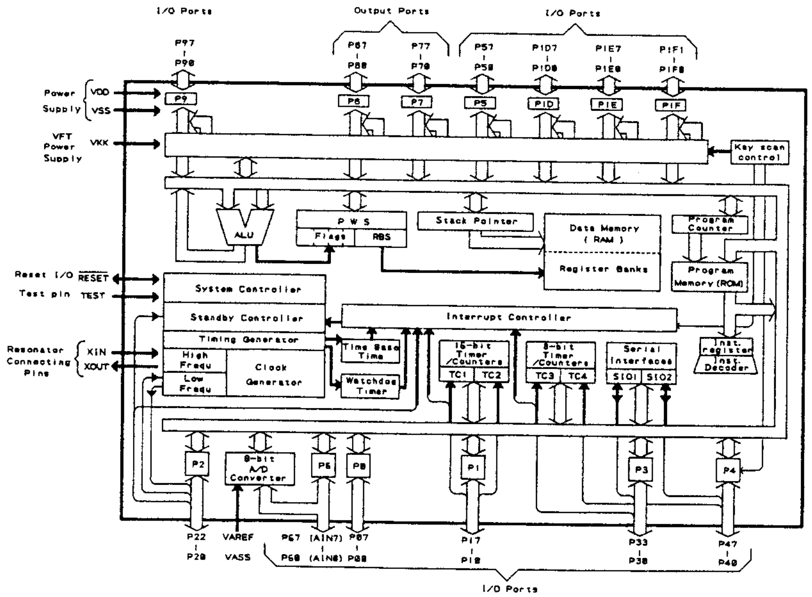
[U-COM FUNCTION : BV[ANAM1228AT]

PIN ASSIGNMENTS

(TOP VIEW)

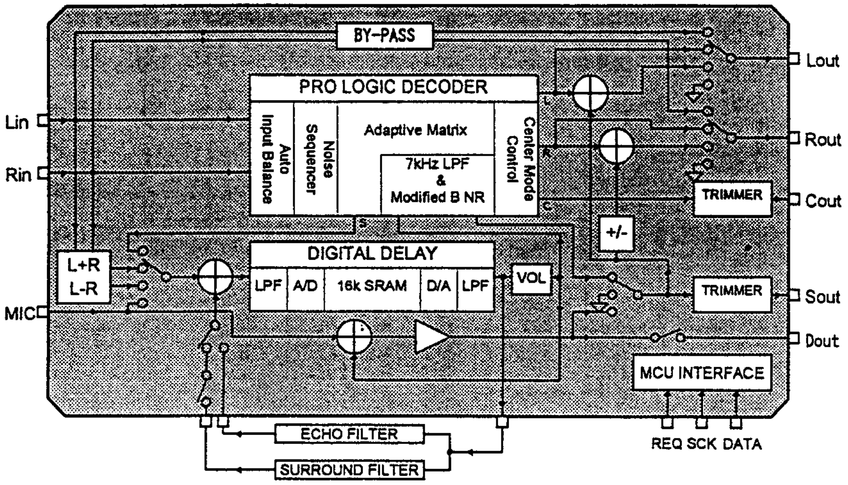

P95 (S19)
P94 (S18)
P93 (S17)
P92 (S16)
P91 (S15)
P90 (S14)
P87 (S13)
P86 (S12)
P85 (S11)
P84 (S10)
P83 (S9)
P82 (S8)
P81 (S7)
P80 (S6)
P77 (S5/G0)
P76 (S4/G1)
P75 (S3/G2)
P74 (S2/G3)
P73 (S1/G4)
P72 (S0/G5)
P71 (G6)
P70 (G7)
P57 (G8)
P56 (G9)
P55 (G10)
P54 (G11)
P53 (G12)
P52 (G13)
P51 (G14)
P50 (G15)
(S20) P96
(S21) P97
(S22) PD0
(S23) PD1
(S24) PD2
(S25) PD3
(S26) PD4
(S27) PD5
(S28) PD6
(S29) PD7
(S30) PE0
(S31) PE1
(S32) PE2
(S33) PE3
(S34) PE4
(S35) PE5
(S36) PE6
(S37) PE7
(S38) PF0
(S39) PF1
VKK
P07
P06
P05
P04
P03
P02
P01
P00
P17
P16
P15 (TC2)
P14 (PPG)
P13 (DVO)
P12 (INT2/TC1)
P11 (INT1)
P10 (INT0)
RESET
XOUT
XIN
VDD
(KEY0) P40
(KEY1) P41
(KEY2) P42
(KEY3) P43
(PWM/PD0/KEY4) P44
(SCK2/KEY5) P45
(SI2/KEY6) P46
(SO2/KEY7) P47
(SCK1) P30
(SI1) P31
(SO1) P32
(INT3/TC3) P33
(AIN0) P60
(AIN1) P61
(AIN2) P62
(AIN3) P63
(AIN4) P64
(AIN5) P65
(AIN6) P66
(AIN7) P67
VSS
VASS
VAREF
VDD
P20
TEST
(XTIN) P21
(XTOUT) P22
VSS

BLOCK DIAGRAM


I/O Ports
Output Ports
I/O Ports
P97 - P90
P87 - P80
P77 - P70
P57 - P50
P1D7 - P1D0
P1E7 - P1E0
P1F1 - P1F0
Power Supply
VDD
VSS
VFT Power Supply
VKK
P9
P8
P7
P5
P1D
P1E
P1F
Key scan control
ALU
P W S
Flags
RBS
Stack Pointer
Data Memory (RAM)
Register Banks
Program Counter
Program Memory (ROM)
Reset I/O
RESET
Test pin
TEST
System Controller
Standby Controller
Timing Generator
High Frequ
Low Frequ
Clock Generator
Interrupt Controller
Time Base Time
Watchdog Timer
16-bit Timer /Counters
TC1
TC2
8-bit Timer /Counters
TC3
TC4
Serial Interfaces
SIO1
SIO2
Inst. register
Inst. Decoder
Resonator Connecting Pins
XIN
XOUT
P2
8-bit A/D Converter
P6
P0
P1
P3
P4
P22 - P20
VAREF
VASS
P67 - P60
(AIN7) - (AIN0)
P07 - P00
P17 - P10
P33 - P30
P47 - P40
I/O Ports

IC BLOCK DIAGRAM (NJW1103)

■SYSTEM BLOCK DIAGRAM

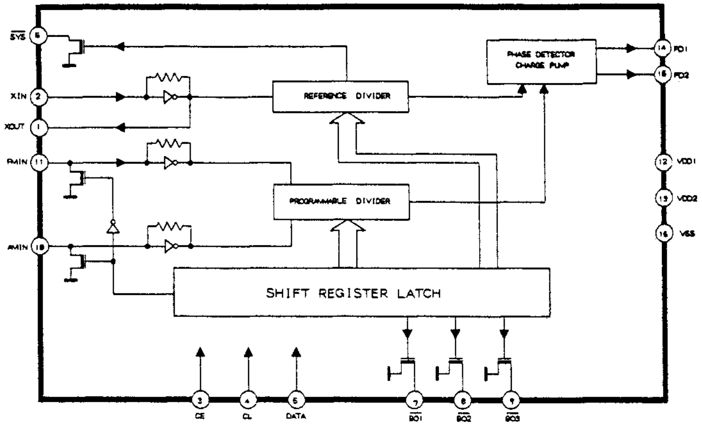


BY-PASS
PRO LOGIC DECODER
Auto Input Balance
Noise Sequencer
Adaptive Matrix
7kHz LPF & Modified B NR
Center Mode Control
DIGITAL DELAY
LPF
A/D
16k SRAM
D/A
LPF
VOL
+/-
TRIMMER
TRIMMER
L+R
L-R
MCU INTERFACE
Lin
Rin
MIC
Lout
Rout
Cout
Sout
Dout
ECHO FILTER
SURROUND FILTER
REQ SCK DATA

■ PIN CONNECTION

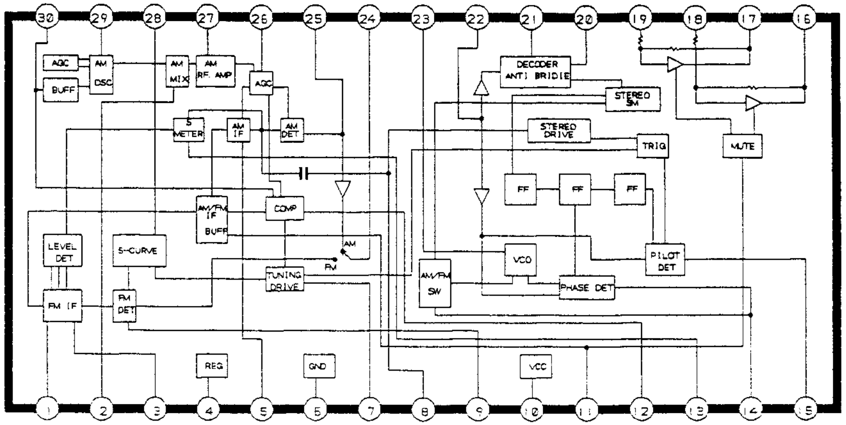
No.	Name	No.	Name	No.	Name	No.	Name
1	NGC1	21	XIN	41	VOL OUT	61	RLC4
2	LOUT	22	XOUT	42	DELAYSIG IN	62	RLC7
3	ROUT	23	DVSS	43	DELAYSIG OUT	63	RLC3
4	CT	24	AVSS	44	FBIN EC	64	RLC8
5	COUT	25	AVDD	45	FBIN SU	65	RLC6
6	ST	26	VREFD	46	S'OUT	66	LLI
7	SOUT	27	MIX OUT	47	DBIN	67	LBPF
8	CMC	28	DELAY IN	48	LPIN	68	RLI
9	SMRO	29	LPF1 IN1	49	DBC1	69	RBPF
10	SMRI	30	LPF1 IN2	50	DBC2	70	LT
11	AGND	31	LPF1 OUT	51	DBC3	71	RT
12	MIC IN	32	AD INT IN	52	PCS3	72	LIN
13	DVDD	33	AD INT OUT	53	PCS6	73	RIN
14	TEST CNT	34	AD CONT	54	PCS2	74	HOLDC
15	DATA	35	DA CONT	55	PCS5	75	AVCC
16	SCK	36	DA INT IN	56	PCS1	76	VREFA
17	REQ	37	DA INT OUT	57	PCS4	77	VREFG
18	LO1	38	LPF2 IN1	58	RLC5	78	IREF
19	LO2	39	LPF2 IN2	59	RLC2	79	NGC3
20	LO3	40	LPF2 OUT	60	RLC1	80	NGC2

IC11 (TUNER) LM7001 (PLL SYNTHESIZER)

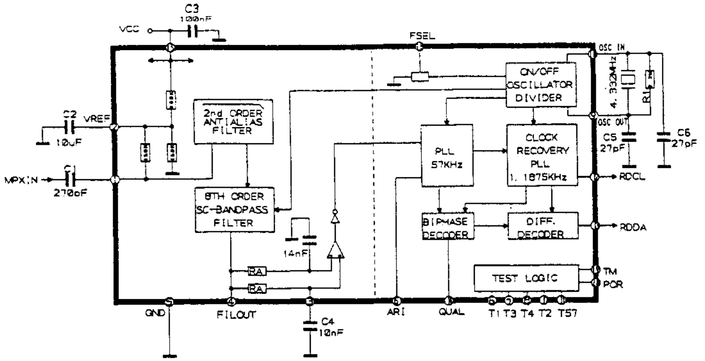


SYS
XIN
XOUT
FMIN
AMIN
REFERENCE DIVIDER
PROGRAMMABLE DIVIDER
PHASE DETECTOR CHARGE PUMP
SHIFT REGISTER LATCH
PD1
PD2
VDD1
VDD2
VSS
CE
CL
DATA
BO1
BO2
BO3

IC12 (TUNER) LA1836M (MPX + IF)

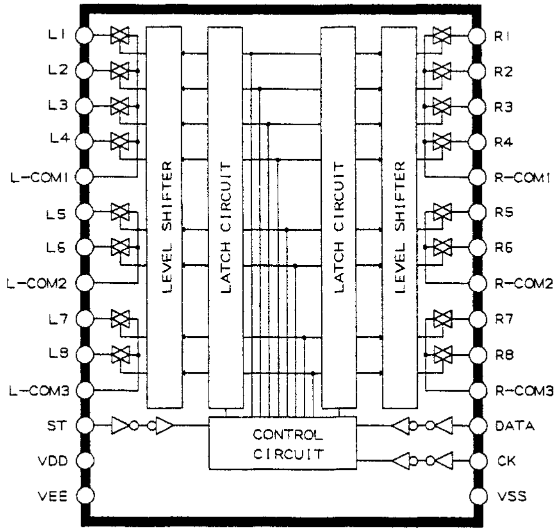


AGC
BUFF
AM OSC
AM MIX
AM RF AMP
AGC
S METER
AM IF
AM DET
DECODER ANTI BRIDIE
STEREO SW
STEREO DRIVE
TRIG
MUTE
AM/FM IF BUFF
COMP
FF
FF
FF
LEVEL DET
S-CURVE
AM
FM
TUNING DRIVE
AM/FM SW
VCO
PHASE DET
PILOT DET
FM IF
FM DET
REG
GND
VCC



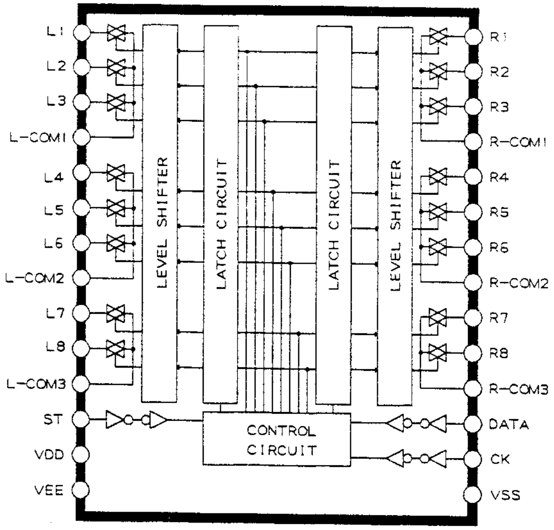
IC18 (TUNER) TDA7330BD (RDS DECODER)

VCC
C3
100nF
FSEL
OSC IN
4.332MHz
R1
OSC OUT
C5
27pF
C6
27pF
ON/OFF
OSCILLATOR
DIVIDER
C2
10uF
VREF
2nd ORDER
ANTIALIAS
FILTER
MPXIN
C1
270pF
PLL
57KHz
CLOCK
RECOVERY
PLL
1.1875KHz
RDCL
8TH ORDER
SC-BANDPASS
FILTER
14nF
BIPHASE
DECODER
DIFF.
DECODER
RDDA
RA
RA
TEST LOGIC
TM
POR
GND
FILOUT
C4
10nF
ARI
QUAL
T1 T3 T4 T2 T57



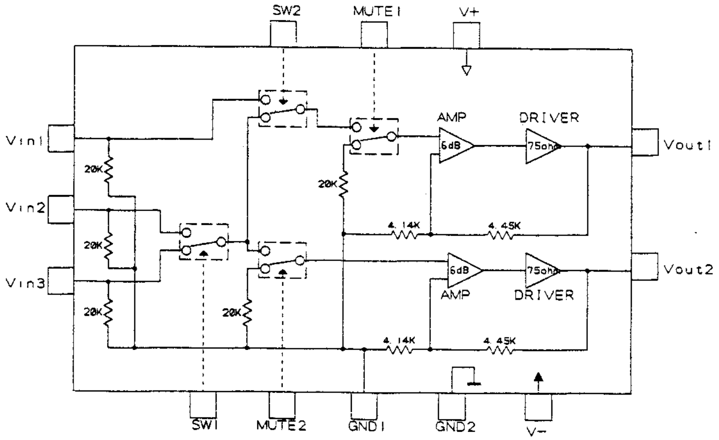
IC23 (INPUT) NJU7313 (FUNCTION SEL)

L1
L2
L3
L4
L-COM1
L5
L6
L-COM2
L7
L8
L-COM3
ST
VDD
VEE
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
CONTROL
CIRCUIT
R1
R2
R3
R4
R-COM1
R5
R6
R-COM2
R7
R8
R-COM3
DATA
CK
VSS



IC22 (INPUT) NJU7312 (FUNCTION SEL)

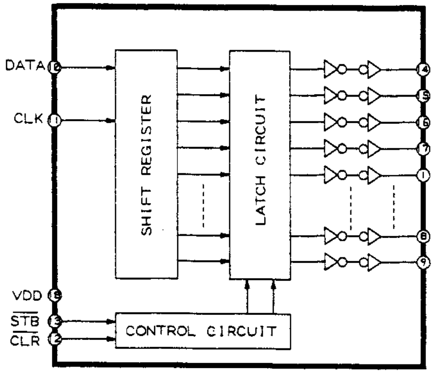
L1
L2
L3
L-COM1
L4
L5
L6
L-COM2
L7
L8
L-COM3
ST
VDD
VEE
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
CONTROL
CIRCUIT
R1
R2
R3
R-COM1
R4
R5
R6
R-COM2
R7
R8
R-COM3
DATA
CK
VSS



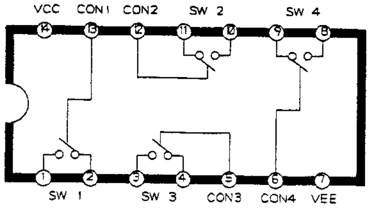
IC48 (INPUT) NJM2279D (VIDEO CONTROL)

SW2
MUTE1
V+
AMP
DRIVER
Vin1
6dB
75ohm
Vout1
20K
20K
Vin2
4.14K
4.45K
20K
Vin3
6dB
75ohm
Vout2
20K
AMP
DRIVER
20K
4.14K
4.45K
SW1
MUTE2
GND1
GND2
V-

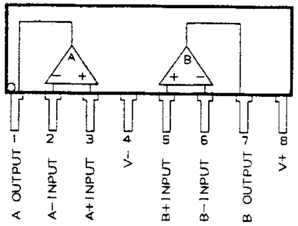
IC82 (FRONT) NJU3713 (DATA CONVERTER)


DATA ⑩
CLK ⑪
VDD
STB ⑬
CLR ⑫
SHIFT REGISTER
LATCH CIRCUIT
CONTROL CIRCUIT
⑭ P1
⑮ P2
⑯ P3
⑰ P4
① P5
⑧ P11
⑨ P12

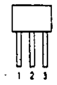
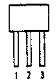
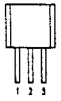
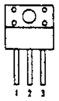
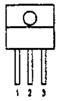
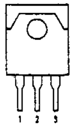
IC22 (INPUT) LC4966(AUDIO CONTROL)


VCC ⑭
CON1 ⑬
CON2 ⑫
SW 2 ⑪ ⑩
SW 4 ⑨ ⑧
SW 1 ① ②
SW 3 ③ ④
CON3 ⑤
CON4 ⑥
VEE ⑦

IC21/25/32/33 (INPUT)
IC51/52/61/62 (AMP)
IC71/71/73/74 (FRONT)
NJM4556AL BLOCK DIAGRAM
NJM4558 (9) L (IC51)


A
B
1 A OUTPUT
2 A− INPUT
3 A+ INPUT
4 V−
5 B+ INPUT
6 B− INPUT
7 B OUTPUT
8 V+

TRANSISTOR BLOCK DIAGRAM

TO-92L  1. Emitter 2. Collector 3. Base KSA1175Y KSB811Y KSD1021Y KSAC2785Y KTA114Y KTA144E KTC114Y KTC144T KTC3192 KTA1271Y	TO-92  1. Emitter 2. Collector 3. Base KTD1302T KTC3228Y KTC3200GR	TO-92L.  1. Emitter 2. Collector 3. Base KSA916Y KSC2316Y
TO-220  1. Emitter 2. Collector 3. Base KTA1659AY KTC4370AY 2SD2058	TO-220  1. Emitter 2. Collector 3. Base KSA614Y MC7812C KSD288Y MC7912C	T0-3P  1. Emitter 2. Collector 3. Base 2SC3856 2SC4468 2SA1492 2SA1695

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTIONS

EQUIPMENT NEEDED:

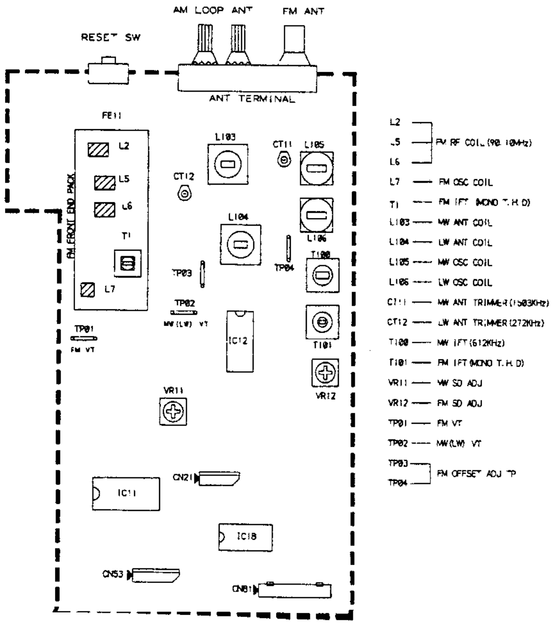
MW(AM) Signal Generator
FM Signal Generator
Oscilloscope
VTVM(AC, DC)
Test loop antenna (MW Adjustment)
Dummy antenna (FM Adjustment)
Stereo signal modulator (RDS IN)
Frequency counter
Distortion analyser

IMPORTANT

1. Check power-source voltage.
2. Set the function switch to band aligned.
3. Keep the signal input as low as possible to adjust accurately.
4. Modulation and modulation frequency.

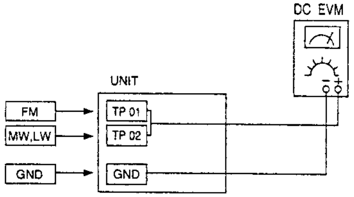
Item / Band	Modulation	Modulation frequency
MW/LW	30%	400Hz
FM	100%(75KHz Dev.)	400Hz

■ ADJUSTMENT POINT


AM LOOP ANT
FM ANT
RESET SW
ANT TERMINAL
FE11
FM FRONT END PACK
L2
L5
L6
T1
L7
TP01
FM VT
TP02
MW(LW) VT
TP03
TP04
CT12
L103
CT11
L105
L104
L106
T100
IC12
T101
VR11
VR12
IC11
CN21
IC18
CN53
CN81
L2, L5, L6 — FM RF COIL (90.10MHz)
L7 — FM OSC COIL
T1 — FM IFT (MONO T.H.D)
L103 — MW ANT COIL
L104 — LW ANT COIL
L105 — MW OSC COIL
L106 — LW OSC COIL
CT11 — MW ANT TRIMMER (1503KHz)
CT12 — LW ANT TRIMMER (272KHz)
T100 — MW IFT (612KHz)
T101 — FM IFT (MONO T.H.D)
VR11 — MW SD ADJ
VR12 — FM SD ADJ
TP01 — FM VT
TP02 — MW(LW) VT
TP03, TP04 — FM OFFSET ADJ TP

1. TUNING FREQUENCY RANGE ADJUSTMENTS

(FM) DC VOLTMETER ·········CONNECT TO TEST POINT TP01 and GND
(MW, LW) DC VOLTMETER ·········CONNECT TO TEST POINT TP02 and GND

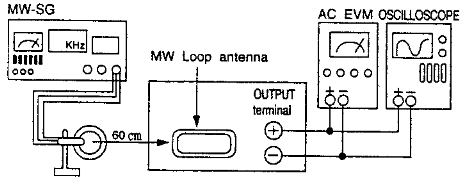

DC EVM
UNIT
FM
MW,LW
GND
TP 01
TP 02
GND

No	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.6V	L7
2	MW	522KHz	1V	L105
3	LW	146KHz	1.3V	L106

2. MW/LW TRACKING ADJUSTMENT

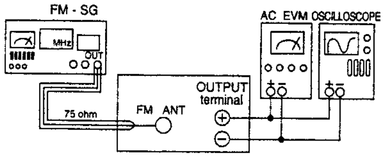
Signal Generator ········Connects to the MW Ant. Coil through the loop antenna.
Adjust for the indication of VTVM of the wave form of scope to be maximum.

Band	Step	Frequency	Adjust for	Adjustment
MW (AM)	1	612KHz	Maximum sensitivity	T100, L103
	2	1503KHz	Maximum sensitivity	CT11, T100
	3	Repeat steps 1 and 2 several times		
LW	1	164KHz	Maximum sensitivity	L104
	2	272KHz	Maximum sensitivity	CT12
	3	Repeat steps 1 and 2 several times		


MW-SG
KHz
MW Loop antenna
60 cm
OUTPUT terminal
AC EVM
OSCILLOSCOPE

3. FM-RF ADJUSTMENT

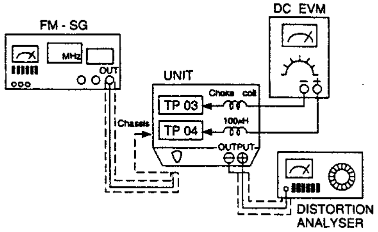
Signal Generator········Connect to FM ANT JACK (FM IN) through the dummy.


FM - SG
MHz
OUT
75 ohm
FM ANT
OUTPUT terminal
AC EVM
OSCILLOSCOPE

No	Frequency	Adjust for	Adjustment
1	90.10MHz	Maximum Sensitivity	L2, L5, L6
2	Repeat step 1 several times		

4. FM MONO DISTORTION ADJUSTMENT

DC VOLT METER ·····················Connect to TP03(-), TP04(+) Through the choke coil(100μH)
Signal Generator ·····················Connect to FM ANT JACK(FM IN) through the dummy.
Distortion Meter ······················Connect to the output


FM - SG
MHz
OUT
UNIT
DC EVM
Choke coil
TP 03
Chassis
TP 04
100μH
OUTPUT
DISTORTION
ANALYSER

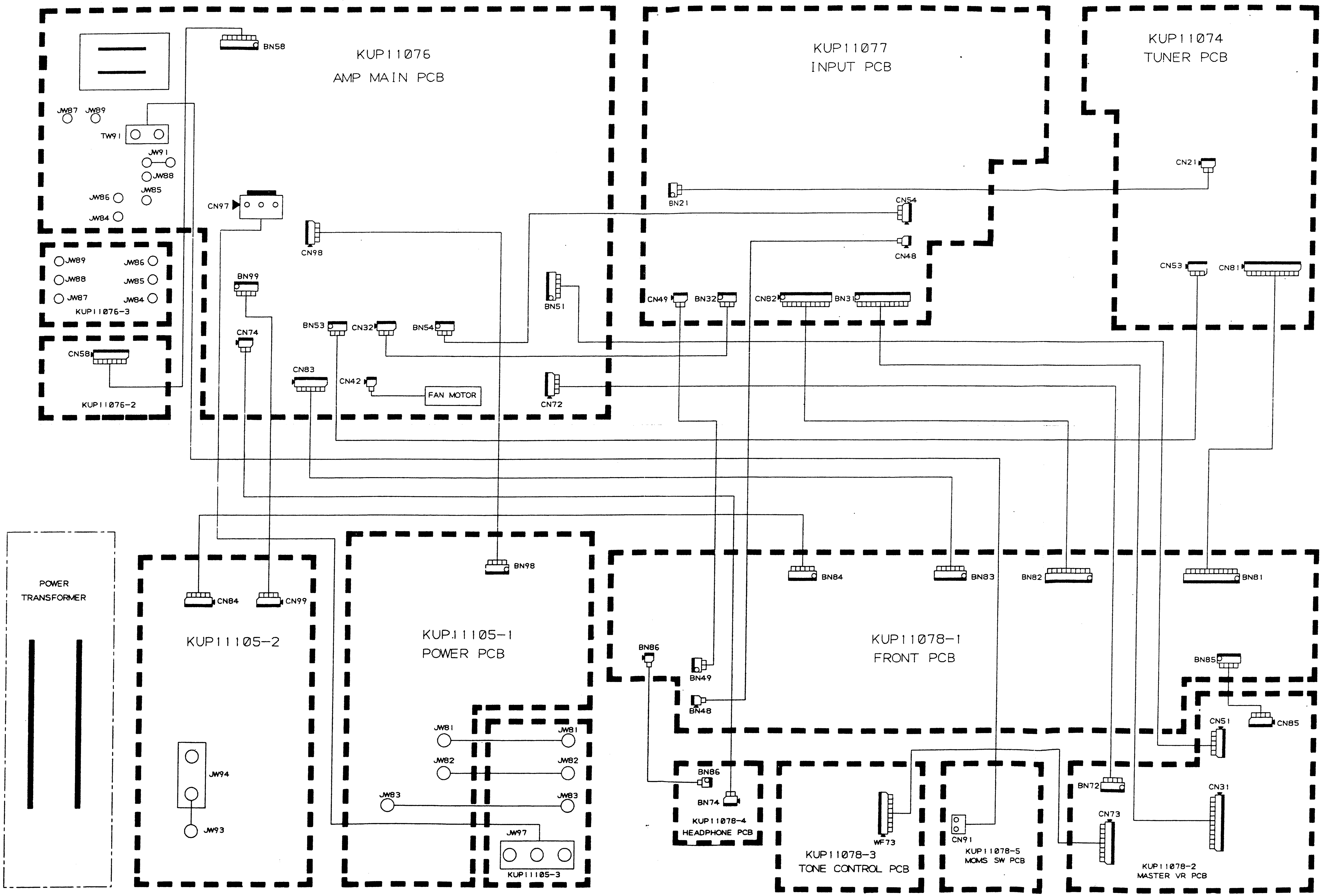
No	Frequency	Adjust for	Adjustment
1	100.50MHz	DC Voltmeter 0V	T101
2	100.50MHz	Minimum T. H. D	T101
3	Repeat steps 1 and 2 Several times.		

5. FM/MW(LW) AUTO STOP LEVEL ADJUSTMENT

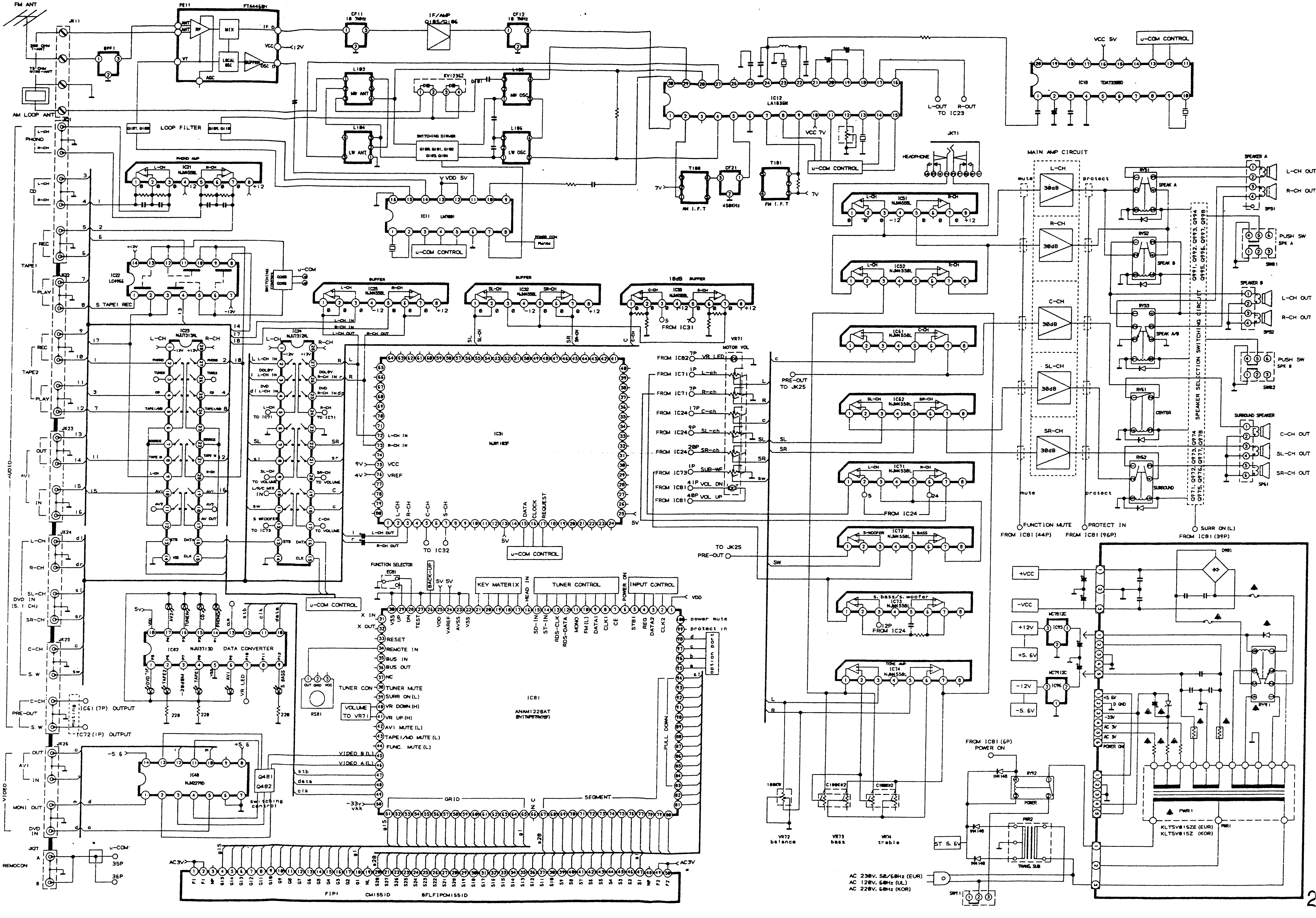
FM SIGNAL GENERATOR ························Connect to FM ANT JACK(FM IN) through the dummy.
(MW, LW)SIGNAL GENERATOR ··················Connect to FM ANT. Coil through the Loop antenna

Band	Step	Signal Generator	Adjust for	Adjustment
MW/LW	1	990KHz 88dB	TUNED Display OFF	VR12
	2	990KHz 88dB	TUNED Display ON	VR12
FM	1	100.1MHz 32dB	TUNED Display OFF	VR11
	2	100.1MHz 32dB	TUNED Display ON	VR11

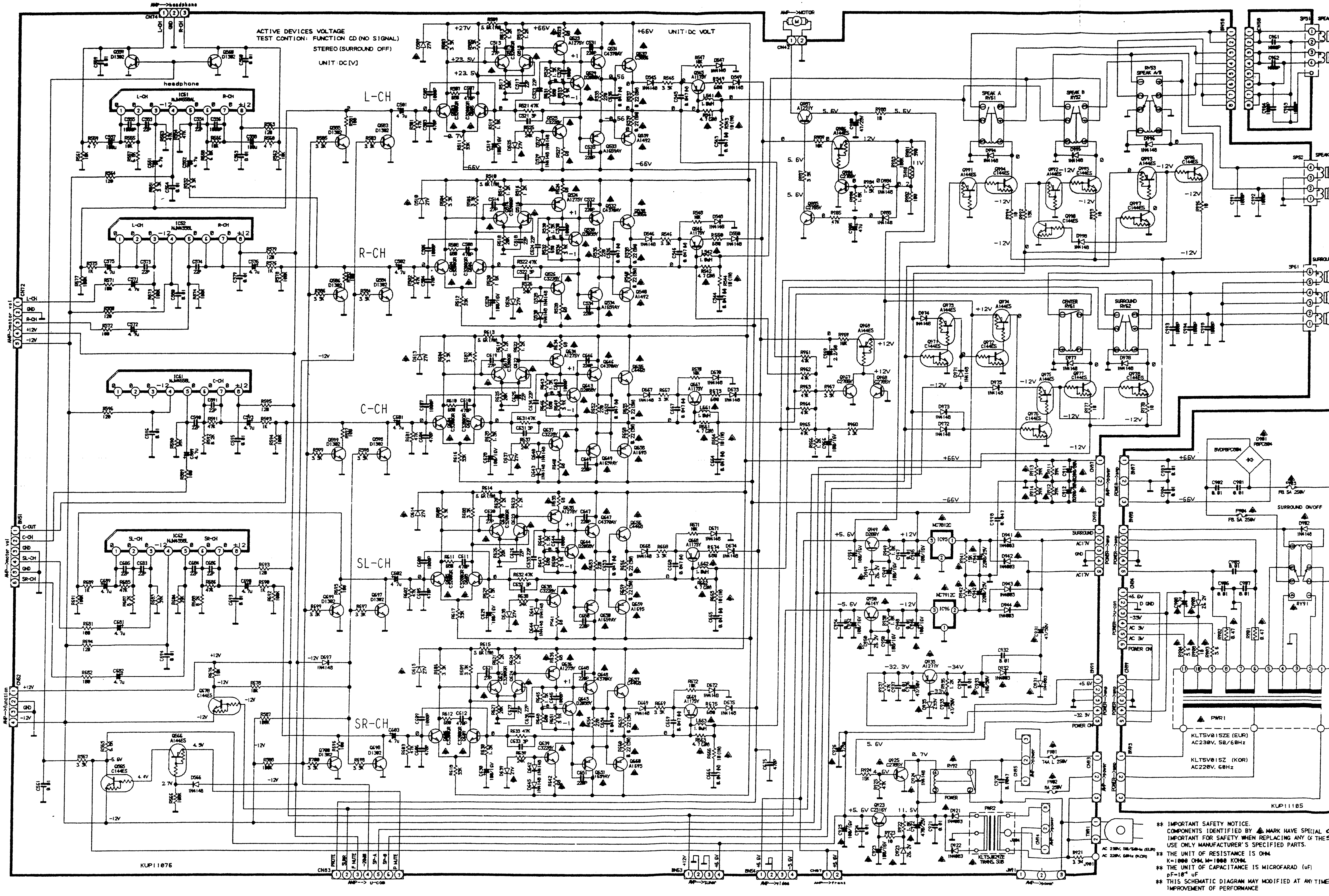
WIRING DIAGRAM


KUP11076
AMP MAIN PCB
BN58
JW87
JW89
TW91
JW91
JW88
JW85
JW86
JW84
CN97
CN98
BN99
CN74
BN53
CN32
BN54
BN51
CN83
CN42
FAN MOTOR
CN72
JW89
JW86
JW88
JW85
JW87
JW84
KUP11076-3
CN58
KUP11076-2
KUP11077
INPUT PCB
BN21
CN54
CN48
CN49
BN32
CN82
BN31
KUP11074
TUNER PCB
CN21
CN53
CN81
POWER
TRANSFORMER
CN84
CN99
KUP11105-2
JW94
JW93
BN98
KUP11105-1
POWER PCB
JW81
JW81
JW82
JW82
JW83
JW83
JW97
KUP11105-3
BN84
BN83
BN82
BN81
KUP11078-1
FRONT PCB
BN86
BN49
BN48
BN85
CN51
CN85
BN86
BN74
KUP11078-4
HEADPHONE PCB
WF73
KUP11078-3
TONE CONTROL PCB
CN91
KUP11078-5
MOMS SW PCB
BN72
CN73
CN31
KUP11078-2
MASTER VR PCB

BLOCK DIAGRAM


FM ANT
AM LOOP ANT
JK11
BPF1
PE11
FTA446
MIX
LOCAL OSC
AGC
+12V
CF11
IF/AMP
Q105/Q106
CF12
L103
MW ANT
L104
LW ANT
KV1236Z
L105
MW OSC
L106
LW OSC
SWITCHING DRIVER
LOOP FILTER
PHONO
CD
TAPE1
REC
PLAY
TAPE2
PHONO AMP
IC21
NJM4558L
IC11
LM7001
u-COM CONTROL
VDD 5V
IC22
LC4966
S TAPE1 REC
IC23
NJU7313L
IC24
NJU7312L
L-CH
R-CH
BUFFER
IC25
NJM4558L
IC32
10dB BUFFER
IC33
FROM IC31
IC31
NJW1103F
VCC
VREF
DATA
CLOCK
REQUEST
TO IC32
VR71
MOTOR VOL
FROM IC82
FROM IC71
FROM IC24
FROM IC73
FROM IC81
VOL DN
VOL UP
PRE-OUT
TO JK25
T100
AM I.F.T
CF21
450KHz
T101
FM I.F.T
IC12
LA1836M
L-OUT
R-OUT
TO IC23
VCC 7V
VCC 5V
IC10
TDA7330BD
JK71
HEADPHONE
MAIN AMP CIRCUIT
30dB
mute
protect
C-CH
SL-CH
SR-CH
IC51
IC52
IC61
IC62
IC71
IC72
IC73
IC74
S-WOOFER
S.BASS
s.bass/s.woofer
FROM IC24
TONE AMP
RY51
RY52
RY53
RY61
RY62
SPEAK A
SPEAK B
SPEAK A/B
CENTER
SURROUND
SPEAKER A
SPEAKER B
SURROUND SPEAKER
L-CH OUT
R-CH OUT
C-CH OUT
SL-CH OUT
SR-CH OUT
PUSH SW SPK A
PUSH SW SPK B
SW801
SW802
SP51
SP52
SP61
SPEAKER SELECTION SWITCHING CIRCUIT
Q991, Q992, Q993, Q994
Q995, Q996, Q997, Q998
Q971, Q972, Q973, Q974
Q975, Q976, Q977, Q978
FUNCTION MUTE
FROM IC81 (44P)
PROTECT IN
FROM IC81 (96P)
SURR ON (L)
FROM IC81 (39P)
AUDIO
AV1
OUT
IN
DVD IN (5.1 CH)
JK23
JK24
JK25
JK26
JK27
PRE-OUT
IC61 (7P) OUTPUT
IC72 (1P) OUTPUT
VIDEO
MONI OUT
DVD IN
REMOCON
u-COM
35P
36P
IC82
NJU3713D
DATA CONVERTER
IC48
NJM2279D
Q481
Q482
switching control
FUNCTION SELECTOR
EC81
BACK-UP
KEY MATERIX
TUNER CONTROL
POWER ON
INPUT CONTROL
HEAD IN
RESET
REMOTE IN
BUS IN
BUS OUT
TUNER CON
TUNER MUTE
SURR ON (L)
VR DOWN (H)
VR UP (H)
AV1 MUTE (L)
TAPE1/MD MUTE (L)
FUNC. MUTE (L)
VOLUME TO VR71
RS81
VIDEO B (L)
VIDEO A (L)
stb
data
clk
IC81
ANAM1228AT
power mute
protect in
option port
PULL DOWN
GRID
SEGMENT
AC3V
FIP1
CM1551D
8FLFIPCM1551D
100KB
VR72 balance
VR73 bass
VR74 treble
ST S.6V
+VCC
-VCC
+12V
+5.6V
-12V
-5.6V
KC7812C
KC7912C
IC95
IC96
D901
RY91
RY92
POWER
FROM IC81 (6P) POWER ON
PWR1
PWR2
TRANS. SUB
KLT5V015ZE (EUR)
KLT5V015Z (KOR)
AC 230V, 50/60Hz (EUR)
AC 120V, 60Hz (UL)
AC 220V, 60Hz (KOR)
SW911

SCHEMATIC DIAGRAM


ACTIVE DEVICES VOLTAGE
TEST CONTION: FUNCTION CD (NO SIGNAL)
STEREO (SURROUND OFF)
UNIT: DC [V]
UNIT: DC VOLT
AMP—>headphone
headphone
L-CH
R-CH
C-CH
SL-CH
SR-CH
AMP—>MOTOR
SPEAKER A
L-CH OUT
R-CH OUT
SPEAKER B
SURROUND SPEAKER
C-CH OUT
SL-CH OUT
SR-CH OUT
SPEAK A
SPEAK B
SPEAK A/B
CENTER
SURROUND
SURROUND ON/OFF
+66V
-66V
+12V
-12V
+5.6V
-5.6V
MC7812C
MC7912C
PWR1
KLT5V015ZE (EUR)
AC230V, 50/60Hz
KLT5V015Z (KOR)
AC220V, 60Hz
POWER ON
PWR2
KLT5J02VZE TRANS SUB
KUP11076
KUP11105
AMP—> u-com
AMP—>tuner
AMP—>video
AMP—>front
AMP—>power

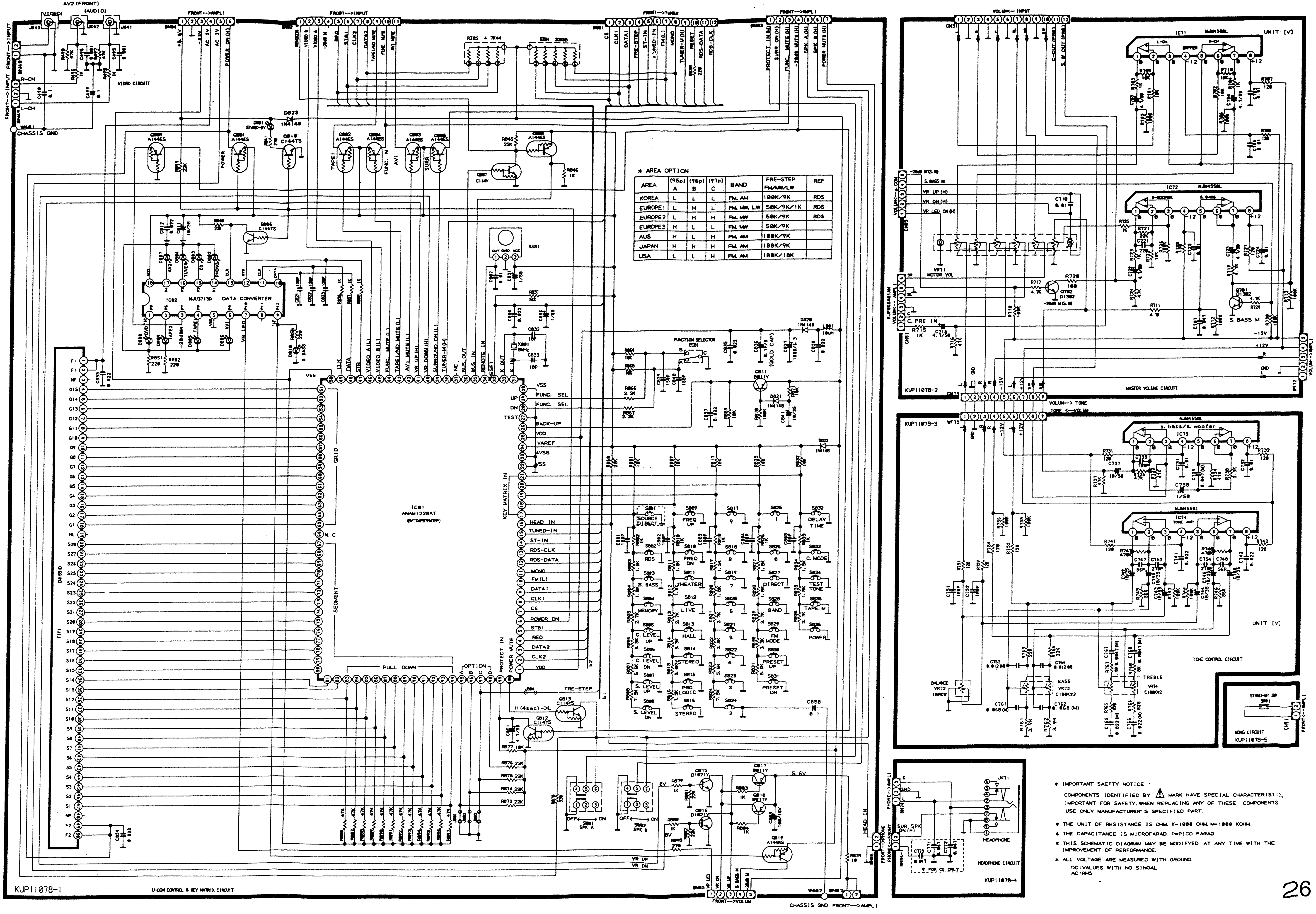
** IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY ▲ MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM.

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
pF=10^{-6} uF

** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE

AA-V1200 FRONT SCHEMATIC DIAGRAM


AV2 (FRONT)
VIDEO
(AUDIO)
FRONT-->AMPLI
FRONT-->INPUT
FRONT-->TUNER
FRONT-->AMPLI
VOLUM<--INPUT
R-CH
L-CH
CHASSIS GND
VIDEO CIRCUIT
STAND-BY
DATA CONVERTER
IC82 NJU3713D
IC81 ANAM1228AT
GRID
SEGMENT
KEY MATRIX IN
PULL DOWN
OPTION
FUNCTION SELECTOR
SOURCE DIRECT
FREQ UP
FREQ DN
DELAY TIME
C. MODE
TEST TONE
TAPE. M
POWER
RDS
S. BASS
THEATER
DIRECT
MEMORY
LIVE
BAND
C. LEVEL UP
C. LEVEL DN
HALL
FM MODE
STEREO
PRESET UP
PRESET DN
S. LEVEL UP
S. LEVEL DN
PRO LOGIC
SPK A
SPK B
VR UP
VR DN
FRE-STEP
H (4sec)->L
MASTER VOLUME CIRCUIT
IC71 NJM4580L
IC72 NJM4558L
IC73 NJM4558L
IC74 NJM4558L
VR71 MOTOR VOL
UNIT [V]
KUP11078-1
U-COM CONTROL & KEY MATRIX CIRCUIT
KUP11078-2
KUP11078-3
TONE CONTROL CIRCUIT
BALANCE VR72 100KW
BASS VR73 C100K×2
TREBLE VR74 C100K×2
STAND-BY SW
NOMS CIRCUIT
KUP11078-5
HEADPHONE
HEADPHONE CIRCUIT
KUP11078-4
VOLUM-> TONE
TONE <--VOLUM
FRONT-->VOLUM
CHASSIS GND FRONT-->AMPLI
PHONE-->AMPLI
PHONE<--FRONT

* AREA OPTION

AREA	(95p) A	(96p) B	(97p) C	BAND	FRE-STEP FM/MW/LW	REF
KOREA	L	L	L	FM. AM	100K/9K	RDS
EUROPE1	L	H	L	FM. MW. LW	50K/9K/1K	RDS
EUROPE2	L	H	H	FM. MW	50K/9K	RDS
EUROPE3	H	L	L	FM. MW	50K/9K	
AUS	H	L	H	FM. AM	100K/9K	
JAPAN	H	H	H	FM. AM	100K/9K	
USA	L	L	H	FM. AM	100K/10K	

* IMPORTANT SAEFTY NOTICE :

COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTIC, IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PART.

* THE UNIT OF RESISTANCE IS OHM. K=1000 OHM, M=1000 KOHM.

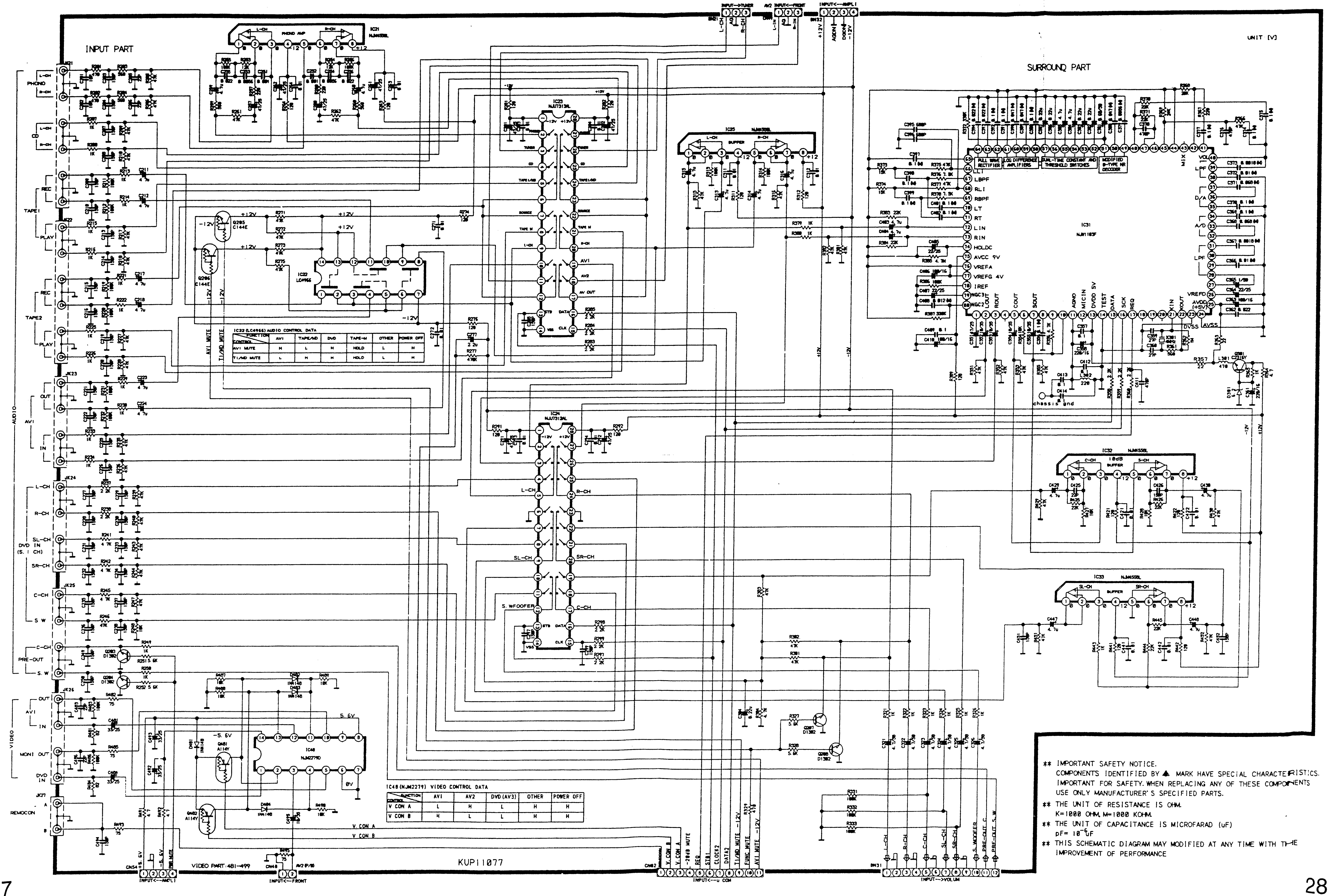
* THE CAPACITANCE IS MICROFARAD P=PICO FARAD

* THIS SCHEMATIC DIAGRAM MAY BE MODIFYED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.

* ALL VOLTAGE ARE MEASURED WITH GROUND.

DC : VALUES WITH NO SINGAL
AC : RMS

AA-V1200 INPUT SCHEMATIC DIAGRAM


UNIT [V]
INPUT PART
SURROUND PART
PHONO
CD
TAPE1
TAPE2
REC
PLAY
AUDIO
AV1
OUT
IN
DVD IN (5.1 CH)
L-CH
R-CH
SL-CH
SR-CH
C-CH
S W
PRE-OUT
VIDEO
MONI OUT
REMOCON
IC21 NJM4558L
PHONO AMP
IC22 LC4966
IC23 NJU7313AL
IC24 NJU7313AL
IC25 NJM4558L
BUFFER
IC31 NJM1183F
IC32 NJM4558L
IC33 NJM4558L
IC48 NJM2279D
FULL WAVE RECTIFIER
LOG DIFFERENCE AMPLIFIERS
DUAL-TIME CONSTANT AND THRESHOLD SWITCHES
MODIFIED B-TYPE NR DECODER
AV1 MUTE
T1/MD MUTE
S. WFOOFER
V CON A
V CON B
chassis gnd
INPUT-->TUNER
AV2 INPUT<--FRONT
INPUT<--AMPL1
VIDEO PART 481-499
INPUT<--AMPL1
INPUT<--FRONT
INPUT<--u COM
INPUT-->VOLUM
KUP11077

IC22 (LC4966) AUDIO CONTROL DATA

FUNCTION / CONTROL	AV1	TAPE/MD	DVD	TAPE-M	OTHER	POWER OFF
AV1 MUTE	H	L	H	HOLD	L	H
T1/MD MUTE	L	H	H	HOLD	L	H

IC48 (NJM2279) VIDEO CONTROL DATA

FUNCTION / CONTROL	AV1	AV2	DVD (AV3)	OTHER	POWER OFF
V CON A	L	H	L	H	H
V CON B	H	L	L	H	H

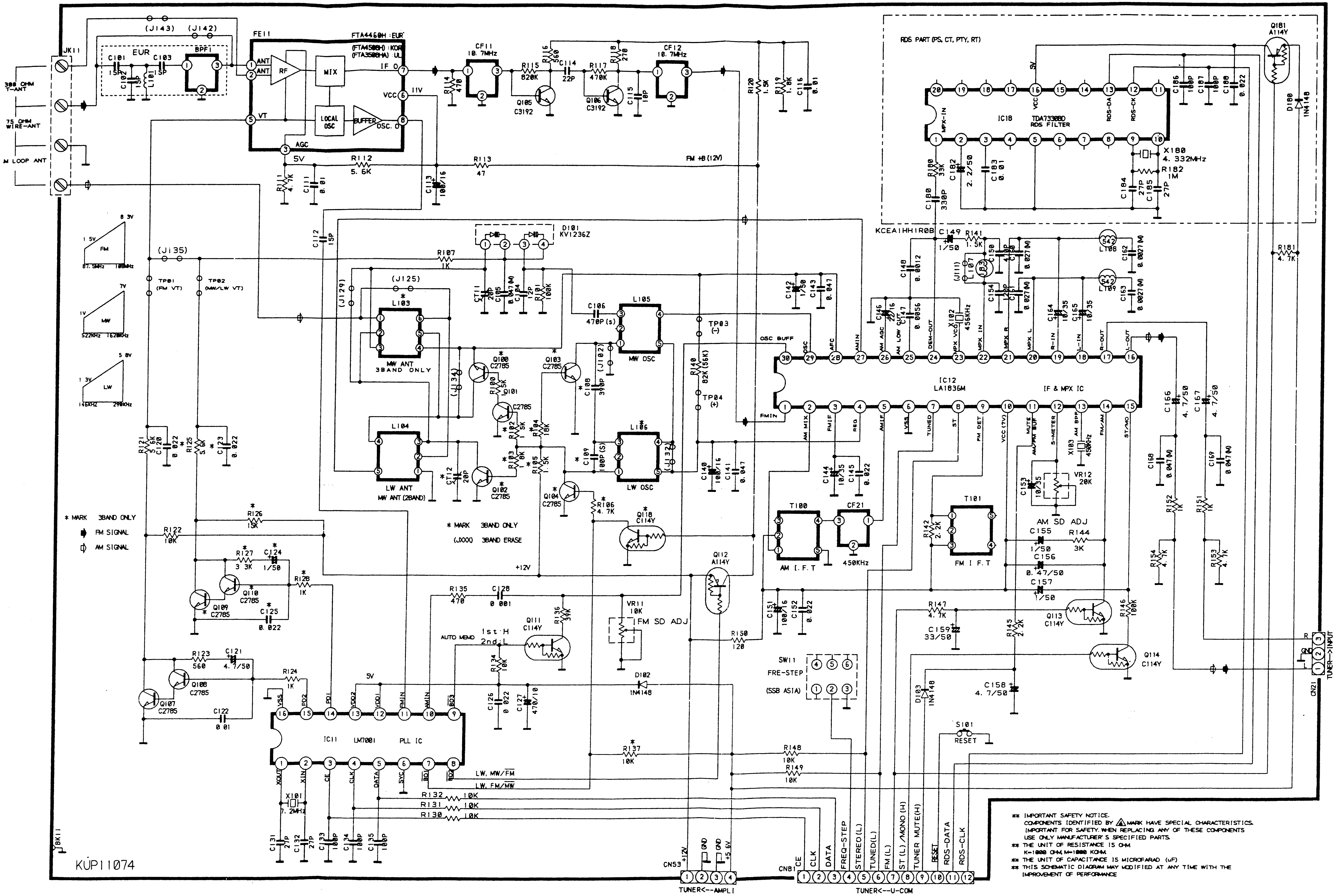
** IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY ▲ MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM.

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
pF= 10^{-6} uF

** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE

AA-V1200 TUNER SCHEMATIC DIAGRAM


JK11
300 OHM T-ANT
75 OHM WIRE-ANT
AM LOOP ANT
(J143) (J142)
EUR
C101 15P
C102 15P
C103 15P
L101
BPF1
FE11
FTA4460H : EUR
(FTA4580H) : KOR
(FTA3580HA) : UL
ANT
RF
MIX
LOCAL OSC
BUFFER
OSC. O
IF O
VCC
VT
AGC
11V
5V
CF11 10.7MHz
CF12 10.7MHz
R114 470
R115 820K
R116 560
C114 22P
R117 470K
R118 270
C115 10P
Q105 C3192
Q106 C3192
R111 4.7K
C111 0.01
R112 5.6K
R113 47
C113 100/16
FM +B (12V)
R120 1.5K
R119 1.6K
C116 0.01
RDS PART (PS, CT, PTY, RT)
IC18 TDA7330BD RDS FILTER
MPX-IN
VCC
RDS-DA
RDS-CK
C186 100P
C187 100P
C188 0.022
X180 4.332MHz
R182 1M
C184 27P
C185 27P
R180 33K
C180 330P
C182 2.2/50
C183 0.01
Q181 A114Y
D180 1N4148
R181 4.7K
KCEA1HH1R0B
C149 1/50
R141 1.5K
L107
(J111)
C150 47P
C151 47P
C152 0.027(M)
L108 542
C162 0.0027(M)
L109 542
C163 0.0027(M)
C154 47P
C155 47P
C156 0.027(M)
C148 0.0012
C142 1/50
C143 0.047
C146 10/16
C147 0.0056
X102 456KHz
C164 10/35
C165 10/35
IC12 LA1836M IF & MPX IC
OSC BUFF
OSC
AFC
AMIN
AM AGC
AM LOW CUT
DEM-OUT
MPX VCO
MPX IN
MPX R
MPX L
R-IN
L-IN
R-OUT
L-OUT
FMIN
AM MIX
FMIF
REG
AMIF
VSS
TUNED
ST
FM DET
VCC (7V)
MUTE AM/FM SW
S-METER
AM BPF
FM/AM
ST/MO
X103 450KHz
C153 10/35
VR12 20K
AM SD ADJ
C166 4.7/50
C167 4.7/50
C168 0.047(M)
C169 0.047(M)
R152 4.7K
R151 4.7K
R154 4.7K
R153 4.7K
FM 1.5V 8.3V 87.5MHz 108MHz
MW 1V 7V 522KHz 1620KHz
LW 1.3V 5.8V 146KHz 290KHz
(Ji35)
TP01 (FM VT)
TP02 (MW/LW VT)
C112 15P
R107 1K
D101 KV1236Z
CT11 20P
C105 0.047(M)
C104 12P
R101 100K
(J129)
(J125)
L103
MW ANT 3BAND ONLY
L104
LW ANT MW ANT (2BAND)
CT12 20P
Q100 C2785
Q101 C2785
Q102 C2785
Q103 C2785
Q104 C2785
R100 15K
R102 15K
R104 10K
R103 10K
R105 1.5K
R106 4.7K
C106 470P (S)
C108 390P
C109 100P (S)
(J134)
(J102)
(J132)
L105 MW OSC
L106 LW OSC
TP03 (-)
TP04 (+)
R140 82K (56K)
C140 100/16
C141 0.047
C144 10/35
C145 0.022
T100 AM I.F.T
CF21 450KHz
R142 2.2K
T101 FM I F T
C155 1/50
R144 3K
C156 0.47/50
C157 1/50
R121 5.6K
C120 0.022
R125 5.6K
C123 0.022
* MARK 3BAND ONLY
FM SIGNAL
AM SIGNAL
* MARK 3BAND ONLY
(JXXX) 3BAND ERASE
R122 10K
R126 15K
R127 3.3K
C124 1/50
R128 1K
Q109 C2785
Q110 C2785
C125 0.022
R123 560
C121 4.7/50
Q108 C2785
Q107 C2785
C122 0.01
R124 1K
Q118 C114Y
Q112 A114Y
+12V
R135 470
C128 0.001
Q111 C114Y
R136 39K
AUTO MEMO
1st:H 2nd:L
R134 10K
VR11 10K FM SD ADJ
D102 1N4148
R150 120
C151 100/16
C152 0.022
R147 4.7K
C159 33/50
R145 2.2K
R146 100K
Q113 C114Y
Q114 C114Y
SW11 FRE-STEP (SSB ASIA)
D103 1N4148
C158 4.7/50
S101 RESET
C126 0.022
C127 470/10
IC11 LM7001 PLL IC
VSS
PD2
PD1
VDD2
VDD1
FMIN
AMIN
BO3
XOUT
XIN
CE
CLK
DATA
SYC
BO1
BO2
LW, MW/FM
LW, FM/MW
R137 10K
R148 10K
R149 10K
R132 10K
R131 10K
R130 10K
X101 7.2MHz
C131 27P
C132 27P
C133 100P
C134 100P
C135 100P
BK11
KUP11074
CN53
+12V
GND
GND
+5.6V
TUNER<--AMPLI
CN81
CE
CLK
DATA
FREQ-STEP
STEREO(L)
TUNED(L)
FM(L)
ST(L)/MONO(H)
TUNER MUTE(H)
RESET
RDS-DATA
RDS-CLK
TUNER<--U-COM
CN21
TUNER-->INPUT
R
GND
L

** IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF)

** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE

FM ONLY
UNIT [V]

TDA7330D (IC18)	
1pin	2.4
2	2.4
3	1.7
4	1.7
5	0
6	2.9
7	2.6
8	2.7
9	2.6
10	2.6
11	0
12	0
13	0
14	0
15	5
16	5
17	0
18	2.3
19	2.6
20	2.7

UNIT [V]

LA1836M (IC12)

pin \ band	FM	MW	LW
1	3.6	3.6	3.6
2	7.3	8	8
3	3.6	3.6	3.6
4	3.6	3.6	3.6
5	3.6	3.6	3.6
6	0	0	0
7	0	0	0
8	0	5.2	5.2
9	7.3	8	8
10	7.3	8	8
11	0	0	0
12	4.3	4.2	4.2
13	1.7	1.6	1.6
14	5.7	0	0
15	6.2	6.7	6.6
16	3.6	3.6	3.6
17	3.6	3.6	3.6
18	3.6	3.6	3.6
19	3.6	3.6	3.6
20	3.5	3.5	3.5
21	3.5	3.5	3.5
22	2.8	2.8	2.8
23	4.5	1.4	1.2
24	2.5	3.5	4.0
25	2.8	3.4	3.9
26	0	1.3	1.3
27	3.5	3.2	3.2
28	3.5	3.2	3.6
29	3.6	3.6	3.6
30	1.6	1.3	1.3

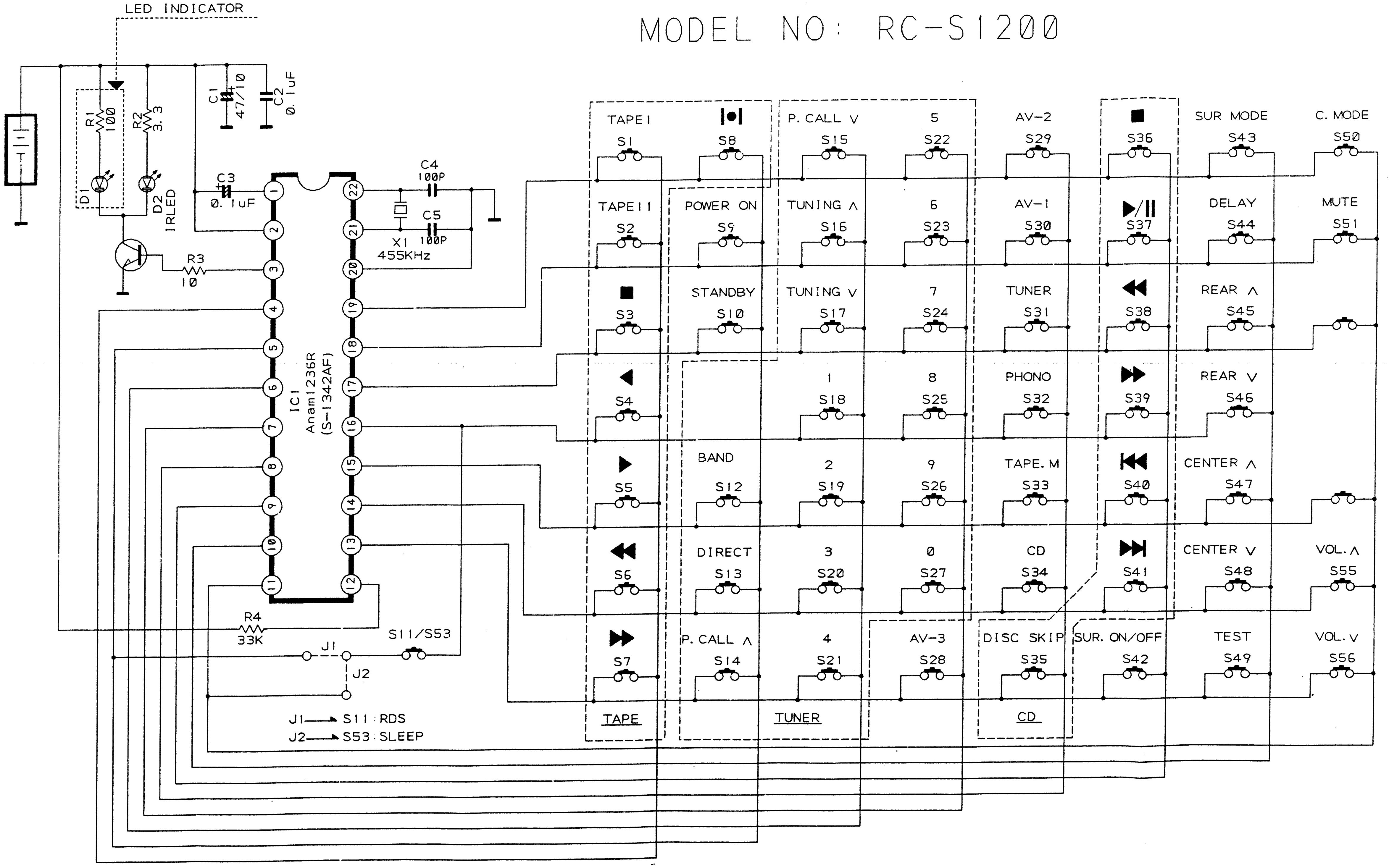
UNIT: [V]

LM7001 (IC11)

pin \ band	FM	MW	LW
1	1.3	1.6	1.3
2	1.6	1.6	1.6
3	0	0	0
4	0	0	0
5	5.2	0	0
6	0	0	0
7	1.8	0	2.2
8	0	2	12
9	0	0	0
10	0	1.8	1.8
11	2.8	0	0
12	4.7	.7	4.7
13	4.7	.7	4.7
14	1.1	1.0	1.1
15	1	1.1	1.1
16	0	0	0

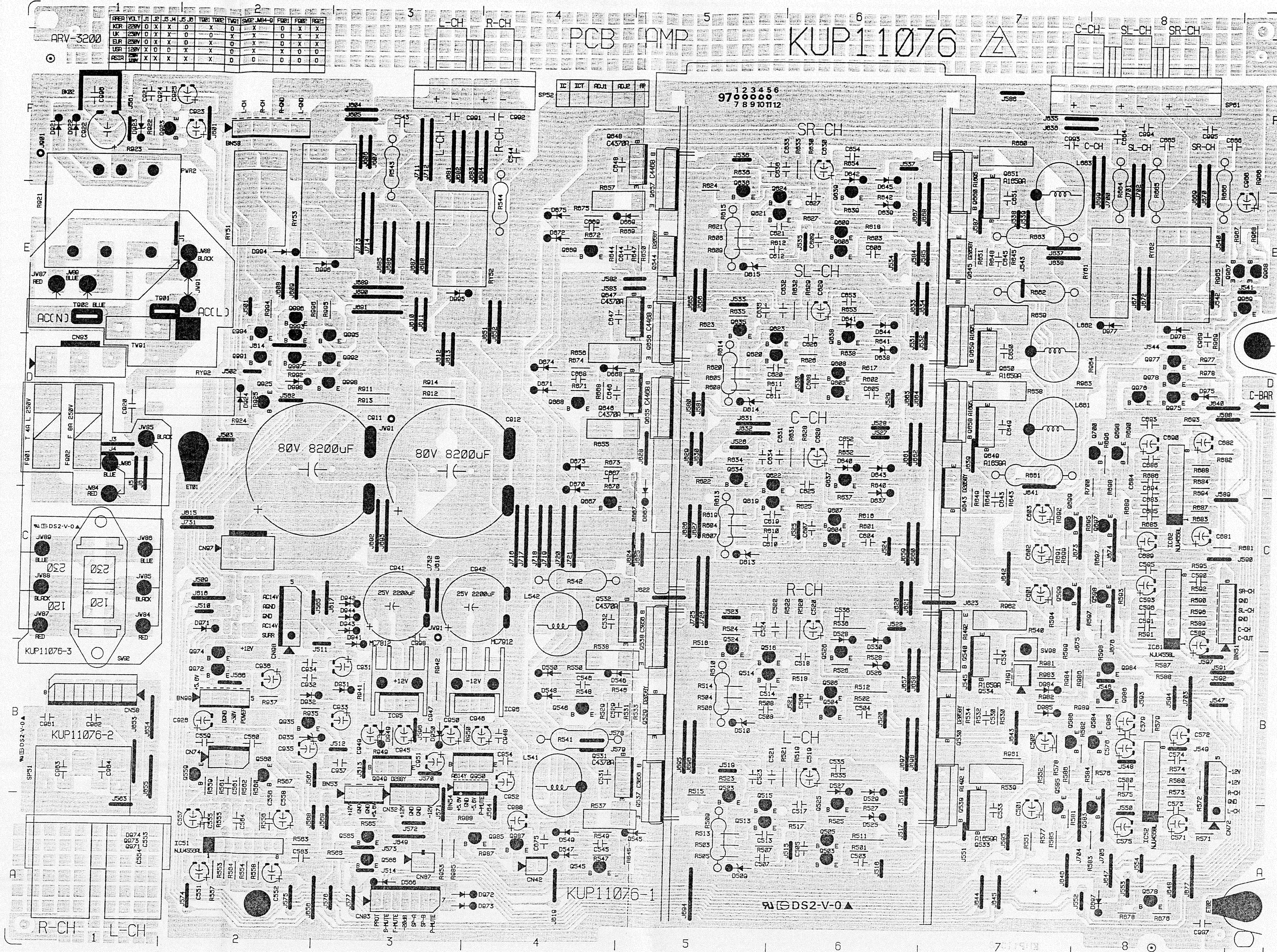
REMOTE CONTROL SCHEMATIC DIAGRAM

MODEL NO: RC-S1200

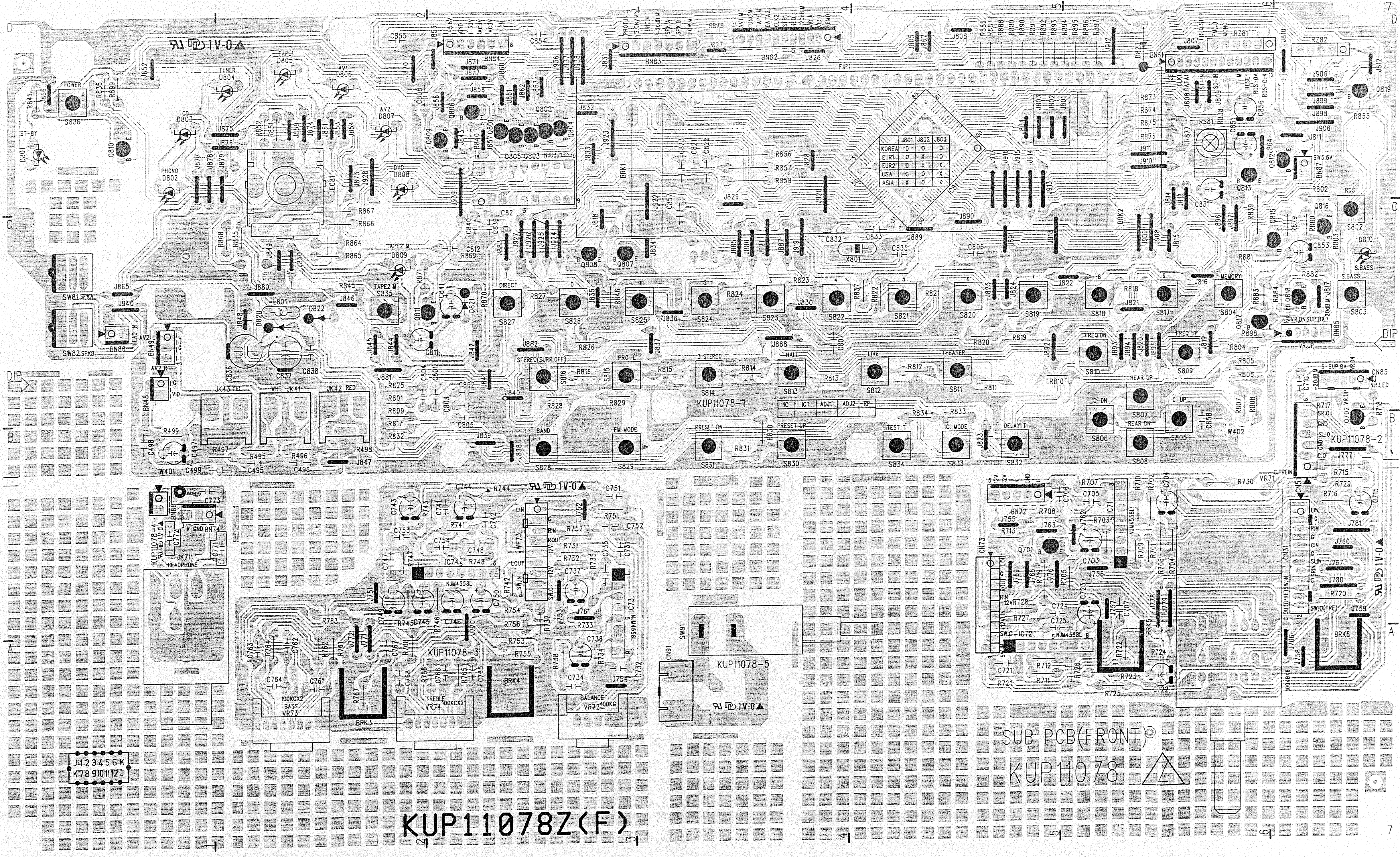


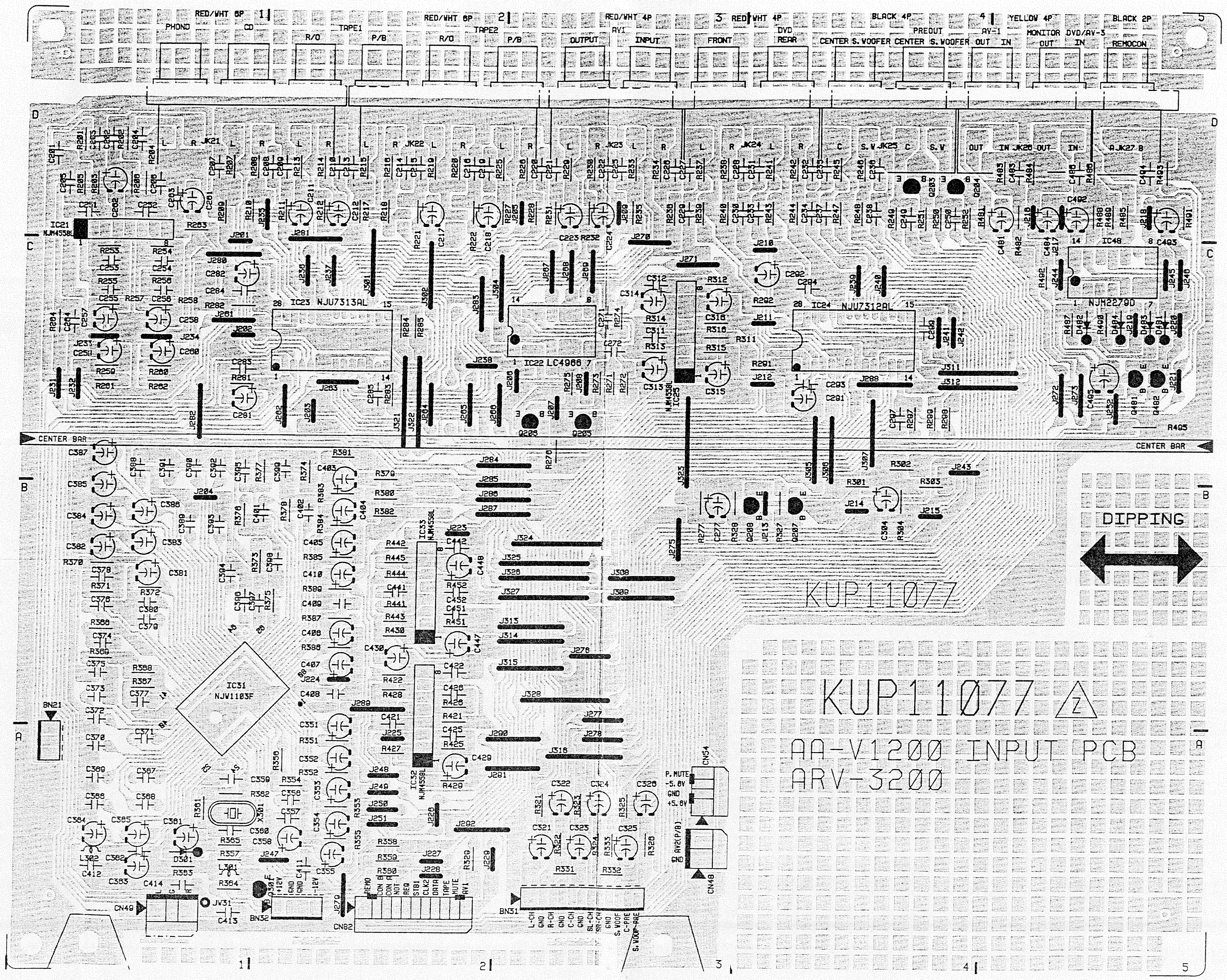
LED INDICATOR
R1 100
R2 3.3
D1
D2 IRLED
C1 47/10
C2 0.1uF
C3 0.1uF
R3 10
R4 33K
C4 100P
C5 100P
X1 455KHz
IC1 Anam1236R (S-1342AF)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
J1
J2
S11/S53
J1 → S11 : RDS
J2 → S53 : SLEEP
TAPE I
S1
S8
P. CALL V
S15
5
S22
AV-2
S29
S36
SUR MODE
S43
C. MODE
S50
TAPE II
S2
POWER ON
S9
TUNING Λ
S16
6
S23
AV-1
S30
S37
DELAY
S44
MUTE
S51
S3
STANDBY
S10
TUNING V
S17
7
S24
TUNER
S31
S38
REAR Λ
S45
S4
1
S18
8
S25
PHONO
S32
S39
REAR V
S46
S5
BAND
S12
2
S19
9
S26
TAPE. M
S33
S40
CENTER Λ
S47
S6
DIRECT
S13
3
S20
0
S27
CD
S34
S41
CENTER V
S48
VOL. Λ
S55
S7
P. CALL Λ
S14
4
S21
AV-3
S28
DISC SKIP
S35
SUR. ON/OFF
S42
TEST
S49
VOL. V
S56
TAPE
TUNER
CD

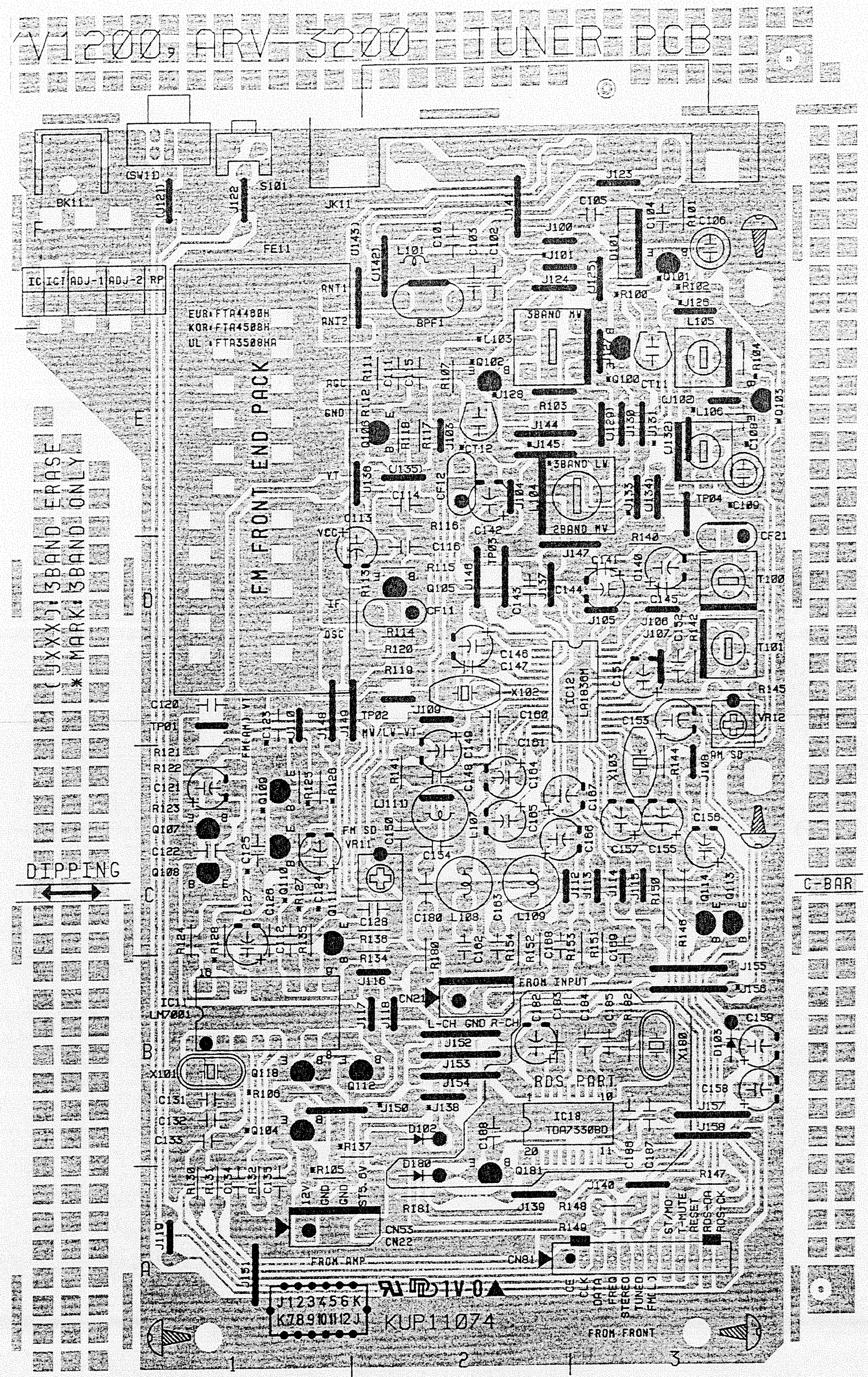
PRINTED CIRCUIT BOARDS

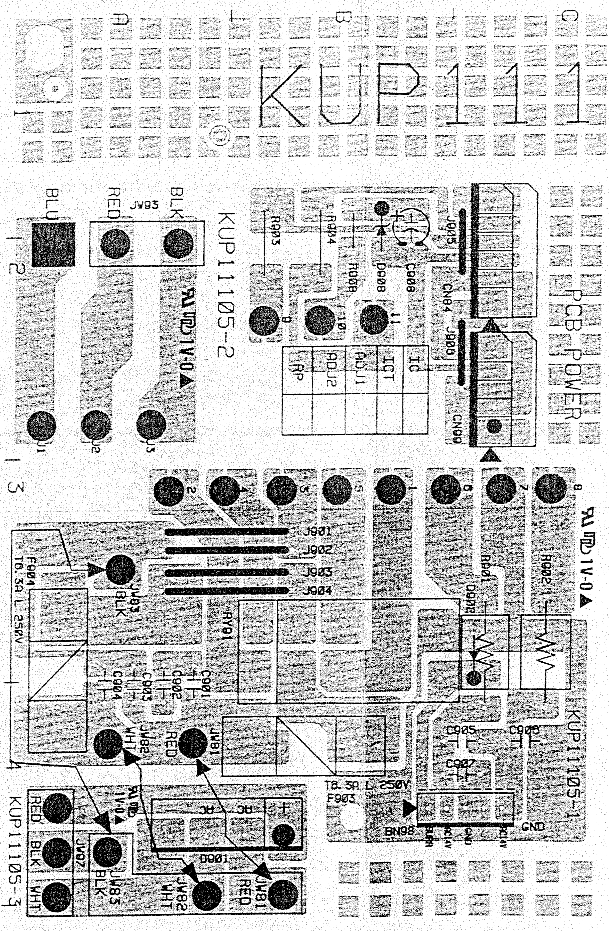

ARV-3200
PCB AMP
KUP11076
KUP11076-1
KUP11076-2
KUP11076-3
L-CH
R-CH
C-CH
SL-CH
SR-CH
C-BAR
80V 8200uF
25V 2200uF
AC(N)
AC(L)
DS2-V-0
1
2
3
4
5
6
7
8
A
B
C
D
E
F

AREA	VOLT	J1	J2	J3 J4	J5 J6	T901 T902	TV01	SW02 JW84-9	F001	F002	R021
KOR	220V	0	X	X	0	X	0	X	0	X	X
UK	230V	0	X	X	0	0	X	X	0	X	X
EUR	230V	0	X	X	0	X	0	X	0	X	X
USA	120V	X	0	0	X	X	0	X	X	0	0
ASIA	230V 120V	X	X	X	X	X	0	0	0	0	0

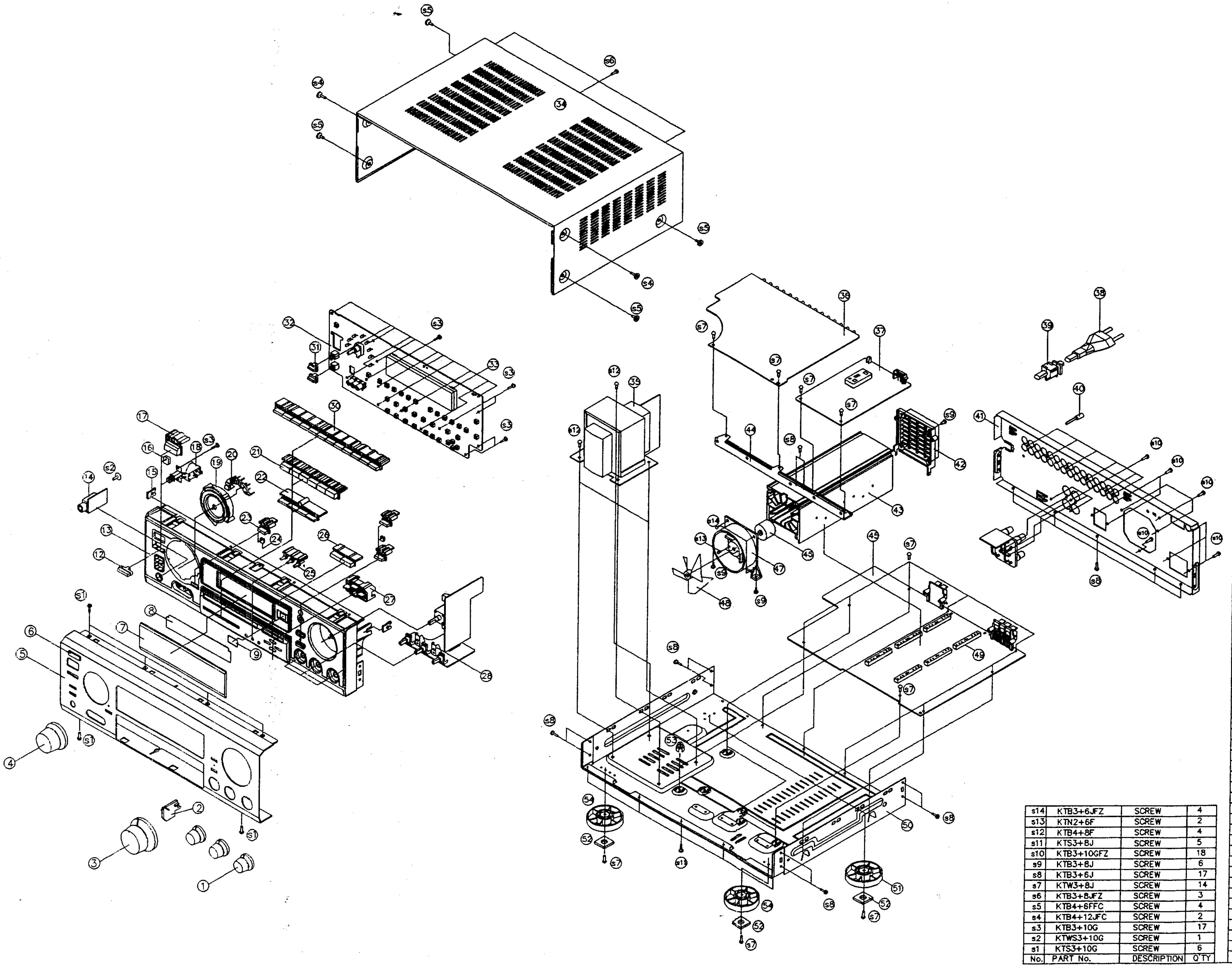

KUP11078Z(F)
SUB PCB(FRONT)
KUP11078
KUP11078-1
KUP11078-2
KUP11078-3
KUP11078-4
KUP11078-5
POWER
ST-BY
TUNER
PHONO
DIRECT
STEREO(SURR OFF)
PRO-L
3 STEREO
HALL
LIVE
THEATER
BAND
FM MODE
PRESET DN
PRESET UP
TEST T
C. MODE
DELAY T
MEMORY
S.BASS
RDS
FREQ DN
FREQ UP
REAR UP
REAR DN
C-DN
C-UP
HEADPHONE
BASS
TREBLE
BALANCE
VR73
VR74
VR72
NJM4558L
KOREA
EUR1
EUR2
USA
ASIA
J801
J802
J803


RED/WHT 6P
PHONO
CD
R/O
TAPE1
P/B
RED/WHT 6P
R/O
TAPE2
P/B
OUTPUT
RED/WHT 4P
AV1
INPUT
RED/WHT 4P
FRONT
DVD
REAR
BLACK 4P
CENTER
S.WOOFER
PREOUT
CENTER
S.WOOFER
AV-1
OUT
IN
YELLOW 4P
MONITOR
OUT
DVD/AV-3
IN
BLACK 2P
REMOCON
1
2
3
4
5
A
B
C
D
IC21 NJM4558L
IC23 NJU7313AL
IC22 LC4966
IC25 NJM4558L
IC24 NJU7312AL
IC40 NJM2279D
IC31 NJU1103F
IC33 NJM4558L
IC32 NJM4558L
CENTER BAR
CENTER BAR
DIPPING
KUP11077
KUP11077
AA-V1200 INPUT PCB
ARV-3200
CN54
P.MUTE
-5.6V
GND
+5.6V
CN40
CN48
CN49
BN21
BN31
BN32
CN82
X301
Q203
Q204
Q205
Q206
Q207
Q208
Q401
Q402
D301


V1200, ARV-3200 TUNER PCB
FM FRONT END PACK
EUR:FTA4498H
KOR:FTA4500H
UL:FTA3500HA
(ХХХ):3BAND ERASE
*MARK:3BAND ONLY
DIPPING
C-BAR
RDS PART
TDA7330BD
FROM INPUT
L-CH GND R-CH
FROM-AMP
FROM-FRONT
3BAND MW
3BAND LW
2BAND MW
KUP11074
1V-0


KUP111
PCB POWER
KUP11105-1
KUP11105-2
KUP11105-3
BLU
RED
BLK
WHT
T0.5A L 250V
T0.5A L 250V
GND
1V-0

EXPLODED VIEW



No.	PART No.	DESCRIPTION	Q'TY
s14	KTB3+6JFZ	SCREW	4
s13	KTN2+6F	SCREW	2
s12	KTB4+8F	SCREW	4
s11	KTS3+8J	SCREW	5
s10	KTB3+10GFZ	SCREW	18
s9	KTB3+8J	SCREW	6
s8	KTB3+6J	SCREW	17
s7	KTW3+8J	SCREW	14
s6	KTB3+8JFZ	SCREW	3
s5	KTB4+6FFC	SCREW	4
s4	KTB4+12JFC	SCREW	2
s3	KTB3+10G	SCREW	17
s2	KTWS3+10G	SCREW	1
s1	KTS3+10G	SCREW	6

No.	PART No.	DESCRIPTION	Q'TY
54	KKL1A048H7	FRONT FOOT	2
53	KHE170	PCB HOLDER	2
52	KHG1A084	CHSUION FOOT	4
51	KKL1A048	FOOT(REAR)	2
50	KUA1A148	BOTTOM CHASSIS	1
49	KMH1A069	TR SUPPORT	6
48	KDD1A013	FAN	1
47	KGP1A016	FRAME FAN	1
46	BVVFB02A104E	MOTOR	1
45	KOP11076B	MAIN PCB ASS'Y	1
44	KMD1A348	SUB BRACKET	1
43	KMY1A123	HEAT SINK	1
42	KGP1A015	HEAT SINK COVER	1
41	KKF1A145Z	REAR PANEL	1
40	KMA2A001	GROUND TERMINAL	1
39	KHR1A030	CORD BUSHING	1
38	BJA2B033Z	POWER CORD	1
37	KOP11074B	TUNER PCB ASS'Y	1
36	KOP11077B	FUNCTION PCB ASS'Y	1
35	KLT5V015ZE	TRANS	1
34	KKC1B085S21	TOP CABINET	1
33	KMD1A209	FLT BRACKET	2
32	KUP11078Z	FRONT PCB ASS'Y	1
31	KBC1A093M7K73	SPEAKER KNOB	2
30	KBT1A463M7K73	MENORY KNOB	1
29			
28	KMD1A081	PCB BRACKET	2
27	KBT1A477M7ZK73	LEVEL KNOB	1
26	KBT1A469M7ZK73	TUNING KNOB	1
25	KBT1A461M7K73	MODE KNOB	1
24	KGL1A130	INDICATOR	2
23	KBT1A462M7K73	MONITOR KNOB	3
22	KBT1A470M7K73	BAND KNOB	1
21	KBT1A468M7K73	STEREO KNOB	1
20	KGL1A131	FUNCTION INDICATOR	1
19	KGR1A123M7K73	FUNCTION ORNAMENT	1
18	KJP02GA89ZM	WAFER	1
17	KBT1A475M7K73	POWER KNOB	1
16	KGL1A039	INDICATOR FLAT	1
15	KNE4060	U-NUT	2
14	BJJ02GA89ZM	HEAD JACK	1
13	KGW1A209M8ZK73	SUB PANEL	1
12	KBC1A094M7K73	POWER KNOB	1
11			
10			
9	KGU1A026	REMOCON FILTER	1
8	KMZ1A064	FIP FILTER	1
7	KGU1A166	FIP WINDOW	1
6	KGB1A045Z	BADGE	1
5	KKM2A066ZC16	FRONT PANEL	1
4	KBN1A078M7K73	FUNCTION KNOB	1
3	KBN1A077M7K73	VOLUME KNOB	1
2	KGL1A132	VOL INDICATOR	1
1	KBN1A075M7K73	ROTARY KNOB	3

PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering.**
   If not, a part different from the one you ordered may be delivered.
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
3. How to read the Parts List.

■ Resistor and Capacitor

Notes :
- Part numbers are indicated for most mechanical parts.
  Please use this part number for parts order.
- IMPORTANT SAFETY NOTICE.
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components, use only manufacture's specified parts.
- The unit of resistance is OHM(Ω)
  K=1000(Ω), M=1000(KΩ)
- The unit of capacitance is MICROFARAD(μF).
- $P=10^{-6}\mu F$

■ Numbering System of Resistor

Example

KRD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
KRD:Carbon	20:1/5W	F:=±1%
KRG:Metal Oxide	25:1/4W	J:=±5%
	50:1/2W	K:=±10%
	1:1W	
KRF:Metal Cement	2:2W	
	3:3W	

■ Numbering System of Capacitor

Example

KCKT	1H	101	K	B
Type	Voltage	Value	Tolerance	Peculiarity

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
KCB:Ceramic	OJ:6.3V	1H:50V DC	C:±0.25pF
KCC:Ceramic	1A:10V	1:125V DC	G:±2%
KCK:Ceramic	1C:16V	KC:400V AC	J:±5%
KCFR:Semiconductor	1E:25V		K:±10%
KCQI:Polyester	1H:50V		Z:+80%, -20%
KCQP:Polypropylene	1V:35V		
KCQS:Polystyrol			

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

■ ELECTRICAL PARTS LIST

P. C BOARD BLOCK PART NO.

Part No.	Description
1. KOP11078	FRONT PCB ASS'Y
2. KOP11077	INPUT PCB ASS'Y
3. KOP11074	TUNER PCB ASS'Y
4. KOP11076	AMP PCB ASS'Y
5. KOP11105	POWER PCB ASS'Y
6. KOP11106	REMOCON PCB ASS'Y

FRONT PCB BLOCK CONSISTS FOLLOWING P.C.B
- μ - COM P. C. BOARD
- SP SWITCH P. C. BOARD
- TONE CONTROL P. C. BOARD
- MASTER VR P. C. BOARD
- AV2 INPUT P. C. BOARD
- POWER SWITCH P. C. BOARD

INOUT PCB BLOCK CONSISTS FOLLOWING P. C. B
- INPUT & C/S AMP P. C. BOARD

TUNER PCB BLOCK CONSISTS FOLLOWING P. C. B
- TUNER AMP P. C. BOARD

AMP PCB BLOCK CONSISTS FOLLOWING P. C. B
- POWER & L/R AMP BOARD
- VIDEO CONTROL P. C. BOARD
- POWER SUPPLY P. C. BOARD
- C/S SPEAKER P. C. BOARD

1. FRONT PCB ASS'Y

REF NO.	PART NO.	DESCRIPTION
IC71~IC74	BVINJM4558L	IC, OP AMP
IC81	BVIANAM1228MT	IC, μ -COM
IC82	BVINJU3713D	IC DECODER
Q701, 702	KVTKTD1302T	T.R
Q801~ Q805	KVTDTA144EST	T.R
Q806, Q807	KVTDTC144TST	T.R
Q808, Q809	KVTDTA144EST	T.R
Q810	KVTDTC144TST	T.R
Q811	KVTKSB811YT	T.R
Q812, 813	KVTDTC114YST	T.R
Q815, 816	KVTKSD1021T	T.R
Q817, 818	KVTKSB811YT	T.R
Q819	KVTDTA144EST	T.R
D801	KVD342VCF02T085	L. E. D GREEN
D802~810	KVD342MCF02T085	L. E. D RED
D820, 821	KVD1N4148MT	DIODE
BN48	KWZAAV1200BN48	WIRE ASS'Y
BN49	KWZAAV1200BN49	WIRE ASS'Y
BN72	KWZAAV1200BN72	WIRE ASS'Y
BN74	KWZAAV1200BN74	WIRE ASS'Y
BN81	KWZAAV1100BN81	WIRE ASS'Y
BN82	KWZAAV1200BN82	WIRE ASS'Y
BN83	KWZAAV1200BN83	WIRE ASS'Y
BN84	KWZAAV1200BN84	WIRE ASS'Y
BN85	KWZAAV1200BN85	WIRE ASS'Y
BN86	KWZAAV1200BN86	WIRE ASS'Y
BN87	KWZAAV1200BN87	WIRE ASS'Y
CN31	KJP12GA19ZM	WAFER
CN51	KJP05GA01ZM	WAFER
CN73	KJP09HB60ZY	WAFER
CN85	KJP05GA01ZM	WAFER
CN91	KJP02GA89ZM	WAFER
C836	BCES5R5V104	CAP, GOLD
C837	⚠ KCEA0JH102T	CAP, ELECT
EC81	BSR2A006Z	VR, ENCODER
FIP1	BFLFIPCMI551D	F. I. P
JK41	KJJ4M013Z	JACK, VCR
JK42	KJJ4M012Z	JACK, VCR
JK43	KJJ4M014Z	JACK, VCR
JK71	BJJ2E020Z	JACK, PHONE
RS81	BRVPNA4612M00HB	SENSOR, REMOCON
RZ81	KRGSN5X 223J	RES, NETWORK
RZ82	KRGSN5X 103J	RES, NETWORK
SW81, 82	KSH2B003Z	SW, PUSH
SW91	KSH1A001ZV	SW, PUSH
VR71	BVVFB02A104Z	VR, MOTOR
VR72	BVV1T01W104Y	RES, VARIABLE
VR73, 74	BVV2W01C104Y	RES, VARIABLE
WF73	KJP09GA63ZY	WAFER
W401	KWZAV350077	WIRE ASS'Y
X801	BOX08000E200C	CRYSTAL

2. INPUT PCB ASS'Y

REF NO.	PART NO.	DESCRIPTION
IC21	BVINJM4558L	IC, OP AMP
IC22	BVINJU7313L	IC, FUNC, SEL
IC23	BVINJU7312L	IC, FUNC, SEL
IC25	BVINJM4558L	IC, OP AMP
IC31	BVINJW1103F	IC, DOLBY
IC32, 33	BVINJM4558L	IC, OP AMP
IC48	BVINJM2279D	IC, VIDEO
Q203, 204	KVTKTD1302T	T.R
Q205, 206	KVTDTC144EST	T.R
Q207, 208	KVTKTD1302T	T.R
Q301	KVTKSC2316YT	T.R
Q481, 482	KVTDTA114YST	T.R
D481~D484	KVD1N4148MT	T.R
BN21	KWZAAV1100BN21	WIRE ASS'Y
BN31	KWZAAV1200BN31	WIRE ASS'Y
BN32	KWZAAV1200BN32	WIRE ASS'Y
JK21, 22	KJJ4R015Z	JACK, IN/OUT
JK23, 24	KJJ4P024Z	JACK, IN/OUT
JK25	KJJ4P023Z	JACK, IN/OUT
JK26	KJJ4P020Z	JACK, IN/OUT
JK27	KJJ4N026Z	JACK, IN/OUT
X301	BVFZTA4. 00MG	RESONATOR

3. TUNER PCB ASS'Y

REF NO.	PART NO.	DESCRIPTION
IC11	BVILM70001	IC, PLL
IC12	BVILA1836M	IC, IF/MPX
IC18	BVITDA7330BD	IC, DECODER
BPF1	KVFBPMB8	B.P.F
CF11, 12	BVFE107MSHAT	FILTER, CERAMIC
CF21	KVFSBF450BL	FILTER, CERAMIC
Q100~Q104	KVTKSC2785YT	T.R
Q105, 106	KVTKTC3192OT	T.R
Q107~Q110	KVTKSC2785YT	T.R
Q111	KVTDTC114YST	T.R
Q112	KVTDTA114YST	T.R
Q113, 114	KVTDTC114YST	T.R
Q118		
Q181	KVTDTA114YST	T.R
D102, 103	KVD1N4148MT	DIODE
D180		
CN21	KJF03GA01ZM	WAFER
CN53	KJP04GA01ZM	WAFER
CN81	KJP12GA19ZM	WAFER
CT11,12	KCRA020S12	CAP, VARIABLE
C106	KCQS1H471JZ	CAP, STYROLE
C109	KCQS1H101JZ	CAP, STYROLE
D101	KVDKV1236Z	DIODE, VARACTOR
FE11	KNVFTA4460H	TUNER PACK
JK11	KJJ3S006Z	TERMINAL, ANT
BK11	KMD1A081	BRACKET, PCB
L101	KLA4Y106Z	COIL, FILTER
L103	KLA2C004	COIL, AM ANT
L104	KLA1B005	COIL, LW ANT
L105	KLO2B008Z	COIL, AM OSC
L106	KLO1B002	COIL, LW OSC
L107	KLQA183KWCZ	COIL FILTER
L108, 109	KLQB542KLZ	COIL
S101	KST1A010Z	SW, TACT
T100	KLI2B103-G	I. F. T, AM
T101	KLI3B028Z	I. F. T, FM
X101	BOX07200D320C	CRYSTAL
X102	BVFZTB456F11	RESONATOR
X103	BVFLZU450C4N	FILTER, CERAMIC
X180	BOX04332A200C	CRYSTAL

4. AMP PCB ASS'Y

REF NO.	PART NO.	DESCRIPTION
IC51	BVINJM4556AL	IC, OP AMP
IC52	BVINJM4558L	IC, OP AMP
IC61, 62	BVINJM4558L	IC, OP AMP
Q503~Q505	⚠ KVTKTC3200GRT	T.R
Q513~Q516	⚠	
Q523, 524	⚠ KVTKTA1275YT	T.R
Q525, 526	⚠ KVTKTC3228YT	T.R
Q531, 532	⚠ KVTKTC4370AY	T.R
Q533, 534	⚠ KVTKTA1659AY	T.R
Q545, 546	⚠ KVTKTA1275YT	T.R
Q559, 560	KVTKTD1302T	T.R
Q565	KVTDTC144EST	T.R
Q566	KVTKTA144EST	T.R
Q583~Q586	KVTKTD1302T	T.R
Q598, 599		
Q604~Q609	⚠ KVTKTC3200GRT	T.R
Q619~Q624	⚠	
Q634~Q636	⚠ KVTKTA1275YT	T.R
Q637~Q639	⚠ KVTKTC3228YT	T.R
Q646~Q648	⚠ KVTKTC4370AY	T.R
Q649~Q651	⚠ KVTKTA1659AY	T.R
Q667~Q669	KVTKSA1175YT	T.R
Q678	KVTDTC144EST	T.R
Q697~Q700	KVTKTD1302T	T.R
Q923	⚠ KVTKSC2316YT	T.R
Q925	KVTKSC2785YT	T.R
Q935	⚠ KVTKTA1271YT	T.R
Q949	⚠ KVTKSD288Y	T.R
Q950	⚠ KVTKSA614Y	T.R
Q967, 968	KVTKSC2785YT	T.R
Q969	KVTDTA144EST	T.R
Q973~Q975		
Q976~Q978	KVTDTC144TST	T.R
Q984, 985	KVTKSC2785YT	T.R
Q986	KVTDTA144EST	T.R
Q987	KVTKTA1271YT	T.R
Q991~Q993	KVTDTA144EST	T.R
Q994~Q998	KVTDTC144EST	T.R
D509, 510	⚠ KVDMTZJ27BT	DIODE, ZENER
D525, 526	⚠	
D527~D530	KVD1N4148MT	DIODE
D545~D550		
D566		
D613~D615	⚠ KVDMTZJ27BT	DIODE, ZENER
D637~D639	⚠	
D640~D645	KVD1N4148MT	DIODE

REF NO.	PART NO.	DESCRIPTION
D667~D675	KVD1N4148MT	DIODE
D697		
D921, 922	⚠ KVD1N4003SRT	DIODE, RECT
D923	KVDMTZJ6.2BT	DIODE, ZENER
D924	⚠ KVD1N4148MT	DIODE
D931, 932	⚠ KVD1N4003SRT	DIODE, RECT
D935	⚠ KVDMTZJ33BT	DIODE, ZENER
D941, 944	⚠ KVD1N4003SRT	DIODE, RECT
D949, 950	⚠ KVDMTZJ6.2BT	DIODE, ZENER
D971~D973	KVD1N4148MT	DIODE
D975		
D977, 978		
D984, 985		
D994~D996		
D998		
BN51	KWZAAV1100BN51	WIRE ASS'Y
BN53	KWZAAV1200BN53	WIRE ASS'Y
BN54	KWZAAV1200BN54	WIRE ASS'Y
BN58	KWZAAV1200BN58	WIRE ASS'Y
BN99	KWZAAV1200BN99	WIRE ASS'Y
CN42	KJP02GA01ZM	WAFER
CN52	KJP04GA01ZM	WAFER
CN58	KJP08GB03ZM	WAFER
CN72	KJP05GA01ZM	WAFER
CN74	KJP03GA01ZM	WAFER
CN83	KJP07GA01ZM	WAFER
CN87	KJP02GA19ZM	WAFER
CN93	KJP03GA89ZM	WAFER
CN97	KJP03GA90ZM	WAFER
CN98	KJP05GA01ZM	WAFER
C911, 912	⚠ KCET80V822N	CAP, ELECT
C920	⚠ BCKWKC472MF	CAP, CERAMIC
C941, 942	⚠ KCEA2EH222E	CAP, ELECT
JW91	KWZAAV1200JW91	WIRE ASS'Y
L541, 542	⚠ KLR9Y004Z	COIL, SPEAKER
L661~L663	⚠	
PWR2	KLT5J029ZW	TRANS, SUB
RY51, 52	⚠ BSL4A004ZU	RELAY
RY53	⚠ KSL4B003ZW	RELAY
RY61	⚠ KSL1A007ZE	RELAY
RY62	⚠ BSL4A004ZU	RELAY
RY92	KSL1A007ZE	RELAY
R509, 510	⚠ KRG1AN562H	RES, MATAL
R537~R540	⚠ KRF5EKR22	RES, MATAL
R541, 542	⚠ KRG1AN4R7H	RES, MATAL
R613~R615	⚠ KRG1AN100H	RES, MATAL
R541, 542	⚠ KRG1AN562H	RES, MATAL
R655~R660	⚠ KRF5EKR22	RES, MATAL
R661~R663	⚠ KRG1AN4R7H	RES, MATAL
R664~R666	⚠ KRG1AN100H	RES, MATAL

REF NO.	PART NO.	DESCRIPTION
SP51	KJJ5P012Z	TERMINAL, SP
SP52	KJJ5P005Z	TERMINAL, SP
SP61	KJJ5R004Z	TERMINAL, SP
TH91	⚠ KRTNTC5D103	THRMISTER
TW91	KJP02GA61ZP	WAFER
	5. POWER PCB ASS'Y	
BN98	KWZAAV1200BN98	WIRE ASS'Y
CN84	KJP06GA03ZM	WAFER
CN99	KJP05GA03ZM	WAFER
D901	⚠ BVDKBU804F	DIODE, BRIDGE
JW81	KWE8212120VV	WIRE, RED
JW82	KWE8215120VV	WIRE, WHITE
JW93	KWZAAV1200JW93	WIRE ASS'Y
JW97	KWZAAV1200JW97	WIRE ASS'Y
RY53	⚠ KSL1A003ZW	RELAY
R901, 902	⚠ KRG1AJ4R7H	RES, FUSE
	6. REMOCON PCB ASS'Y	
IC10	BVIANAM1236R	IC, REMOCON
C101	KCEA1EH470T	CAP, ELECT
C102, 103	KCBS1H104ZFT	CAP, CERAMIC
C104, 105	KCBS1H101KBT	CAP, CERAMIC
D101	KVDAL131RD	L.E.D
D102	KVDAFHP52	L.E.D
Q101	KVTKTC3203YT	T.R
R101	KRD20TJ101T	RES, CARBON
R102	KRD20TJ3R3T	RES, CARBON
R103	KRD20TJ100T	RES, CARBON
R104	KRD20TJ333T	RES, CARBON
X101	BSB455EB1	RESONATOR, CERAMIC
	7.MISCELLANEOUS	
	KSA1A007	AM LOOP ANT ASS'Y
	KSA1A008Z	ANT, FM WIRE
	⚠ KLT5V015ZE	TRANS, MAIN
F901	⚠ KBA2C4000TLE	FUSE(T4A, 250V)
F903, 904	⚠ KBA2C8500NMU	FUSE(8.5A, 250V)
	KRE1A037	LOCKER
	KUR038ANA (RC-S1200)	REMOTE TRANSMITTER ASS'Y